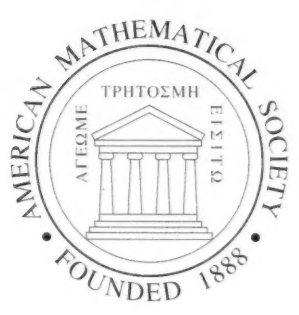

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00A71 Theory of mathematical modeling

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00A72 General methods of simulation

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00A99 Miscellaneous topics

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00Bxx Conference proceedings and collections of papers

00B05 Collections of abstracts of lectures

(Vasil′eva, T. A.) *see* **Proceedings: Congress of the Association of Women Mathematicians**
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00B15 Collections of articles of miscellaneous specific content

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(Galperin, Efim A.) *see* **Lyapunov's methods in stability and control**
(Gerdzhikov, V. S.) *see* **Special Issue: Geometry, integrability and nonlinearity in condensed matter physics**
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Aggregation operators ★ Aggregation operators. **2003e:00026**
Algebraic methodology and software technology ★ Algebraic methodology and software technology.
All about mathematics ★ Alles Mathematik. (German) [All about mathematics] **2003m:00017**
Alles Mathematik ★ Alles Mathematik. (German) [All about mathematics] **2003m:00017**
Annual ★ Aastaraamat 1998. (Estonian) [Annual 1998] **2003a:00013**
— ★ Aastaraamat 1999. (Estonian) [Annual 1999] **2003c:00018**
Aspects of industrial mathematics ★ Aspects of industrial mathematics.
Birthday:
Procesi, Claudio ★ Special issue in celebration of Claudio Procesi's 60th birthday.
Ceteris paribus laws ★ Ceteris paribus laws.
Collection of Polish works on philosophical problems of time and spacetime ★ A collection of Polish works on philosophical problems of time and spacetime. **2003m:00018**
Computational discrete mathematics ★ Computational discrete mathematics. **2003a:00014**
Computer mathematics ★ Компьютерная математика. (Russian) [Computer mathematics] **2003b:00017**
— ★ Компьютерная математика. (Russian) [Computer mathematics] **2003b:00018**
Computer mathematics. Optimization of computations ★ Комп'ютерна математика. Оптимізація обчислень. Том 1. (Ukrainian) [Computer mathematics. Optimization of computations. Vol. 1] **2003e:00027**
— ★ Комп'ютерна математика. Оптимізація обчислень. Том 2. (Ukrainian) [Computer mathematics. Optimization of computations. Vol. 2] **2003e:00028**
Connections between model theory and algebraic and analytic geometry ★ Connections between model theory and algebraic and analytic geometry. **2003d:00010**
Current developments in mathematics ★ Current developments in mathematics, 2001. **2003k:00010**
Festschrift:
Steer, Brian ★ Invitations to geometry and topology. **2003j:00020**
General topology in Banach spaces ★ General topology in Banach spaces. **2003a:00015**
Geometry and analysis ★ {Geometry and analysis}.
Golden section ★ The golden section.
Innovations in teaching abstract algebra ★ Innovations in teaching abstract algebra. **2003b:00019**
Integral geometry. Mathematical models. Recognition of images ★ Интегральная геометрия. Математические модели. Понимание изображений. (Russian) [Integral geometry. Mathematical models. Recognition of images] **2003i:00006**
Invitations to geometry and topology ★ Invitations to geometry and topology. **2003j:00020**
Iowa City, IA ★ Algebraic methodology and software technology.
Lecture Notes in Computer Science ★ Computational discrete mathematics. **2003a:00014**
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Lyapunov's methods in stability and control ★ Lyapunov's methods in stability and control.
Mathematical structures and modeling ★ Математические структуры и моделирование. Вып. 9. (Russian) [Mathematical structures and modeling. No. 9] **2003i:00007**
Mathematics today '01 ★ Математика сегодня '01. [Mathematics today '01] **2003b:00020**
Multiple-valued logic in Eastern Europe ★ Multiple-valued logic in Eastern Europe.
Parabolicity, Volterra calculus, and conical singularities ★ Parabolicity, Volterra calculus, and conical singularities. **2003j:00021**
Phenomenology and mathematics ★ Phenomenology and mathematics.
Possibility theory and fuzzy logic ★ Possibility theory and fuzzy logic.
Proceedings in discrete mathematics ★ Труды по дискретной математике. Том 1. (Russian) [Proceedings in discrete mathematics. Vol. 1] **2003a:00017**
— ★ Труды по дискретной математике. Том 2. (Russian) [Proceedings in discrete mathematics. Vol. 2] **2003a:00018**
Proceedings:
Institute of Applied Mathematics and Mechanics ★ Труды Института Прикладной Математики и Механики. Том 5. (Russian) [Proceedings of the Institute of Applied Mathematics and Mechanics. Vol. 5] **2003f:00017**
— ★ Труды Института Прикладной Математики и Механики. Том 6. (Russian) [Proceedings of the Institute of Applied Mathematics and Mechanics. Vol. 6] **2003f:00018**
Jangjeon Mathematical Society ★ Proceedings of the Jangjeon Mathematical Society. **2003a:00016**
Recent advances in soft computing ★ Recent advances in soft computing.
Science for self-understanding ★ Science for self-understanding. (Japanese)
Spatial logics ★ Spatial logics.
Special Issue:
Celebration of the centennial of Southeast University ★ Special issue in celebration of the centennial of Southeast University.
Geometry, integrability and nonlinearity in condensed matter physics ★ Topical issue on geometry, integrability and nonlinearity in condensed matter physics.
Linear systems and control ★ Fourth special issue on linear systems and control.
Special section on electromagnetic and ultrasonic nondestructive evaluation ★ Special section on electromagnetic and ultrasonic nondestructive evaluation.
Theme: Fuzzy intervals ★ Theme: Fuzzy intervals.
Theme: Fuzzy models ★ Theme: Fuzzy models.
Theme: Information processing ★ Theme: Information processing.

Items with secondary classifications in 00B15

(Cheng, Xiuzhen) *see* **Steiner trees in industry, 2003h:90004**
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(Lemmerling, Philippe) *see* **Total least squares and errors-in-variables modeling, 2003g:00026**
(Rassias, Themistocles M.) *see* **Approximation theory and applications, 2003c:41003**
(Van Huffel, Sabine) *see* **Total least squares and errors-in-variables modeling, 2003g:00026**
(Yao, David D.) *see* **Stochastic modeling and optimization, 2003j:90003**
(Zhang, Han Qin) *see* **Stochastic modeling and optimization, 2003j:90003**
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Dedicated to Jovan Karamata ★ Dédié à Jovan Karamata. [Dedicated to Jovan Karamata]
Dédié à Jovan Karamata ★ Dédié à Jovan Karamata. [Dedicated to Jovan Karamata]
Leuven ★ Total least squares and errors-in-variables modeling. **2003g:00026**
Memorial Issue:
Karamata, Jovan ★ Dédié à Jovan Karamata. [Dedicated to Jovan Karamata]
Quantum computation and quantum cryptography ★ Quantum computation and quantum cryptography.
Steiner trees in industry ★ Steiner trees in industry. **2003h:90004**
Stochastic modeling and optimization ★ Stochastic modeling and optimization. **2003j:90003**
Total least squares and errors-in-variables modeling ★ Total least squares and errors-in-variables modeling. **2003g:00026**
Workshop:
TLS and EIV Modeling ★ Total least squares and errors-in-variables modeling. **2003g:00026**

00B25 Proceedings of conferences of miscellaneous specific interest

(Abu-Saris, Raghib M.) *see* **Mathematics & mathematics education, 2003a:00029**
(Adem, Alejandro) *see* **Orbifolds in mathematics and physics, 2003g:00020**
(Agarwal, Ashok Kumar[1]) *see* **Number theory and discrete mathematics, 2003i:00009**
(Agarwal, Pankaj K.) *see* **Workshop: Computational Geometry**
(Akiyama, Jin) *see* **Special Issue: Discrete and computational geometry**
(Alexander, J. McKenzie) *see* **PSA**
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(Alt, Helmut) *see* **Workshop: Computational Geometry**
(Anile, Angelo Marcello) *see* **Progress in industrial mathematics at ECMI 2000, 2003b:00028**
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(Attig, N.) *see* **Proceedings: Conference on Computational Physics**
(Bajo, Ignacio) *see* **Recent advances in Lie theory, 2003e:00034**
(Bakić, Damir) *see* **Functional analysis, 2003j:00023**
(Bannai, Eiichi) *see* **Conference: Association Schemes, Codes and Designs**
(Bărbulescu, Alina) *see* **Conference: Romanian Mathematical Society**
(Barrett, Jeffrey A.) *see* **PSA**
(Bartolone, Claudio G.) *see* **Combinatorics '98**

(Begehr, Heinrich G. W.) *see* Proceedings: ISAAC Congress, 2003f:00023 *and* 2003g:00024
(Berndt, Bruce C.) *see* Number theory and discrete mathematics, 2003i:00009
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(Bolibrukh, Andrei) *see* Monodromy and differential equations
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(Burger, Marc) *see* Rigidity in dynamics and geometry, 2003b:00029
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(Carriazo Rubio, Alfonso) *see* Proceedings: Meeting of Andalusian Mathematicians, 2003a:00033 *and* 2003a:00034
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(Perez-Chavela, Ernesto) *see* Congress: Mexican Mathematical Society, 2003e:00030
(Peskir, Goran) *see* Functional analysis, 2003j:00023
(Phong, Duong) *see* Mirror symmetry, 2003k:00012
(Pin, Jean-Eric) *see* Max-plus algebras
(Pinus, A. G.) *see* Algebra and model theory, 2003a:00020
(Piovan, Luis A.) *see* Proceedings: Congress of Mathematics, 2003b:00026
(Pogosyan, George S.) *see* Symposium: Integrable Systems
(Ponomarëv, K. N.) *see* Algebra and model theory, 2003a:00020
(Pontryagin, L. S.) *see* Algebra, 2003a:00019 *and* Conference: Pontryagin, Lev Semenovich, Algebra, 2003a:00022
(Poole, Peter H.) *see* Horizons in complex systems
(Preda, Vasile) *see* Proceedings: Conference of the Romanian Society of Probability and Statistics
(Prophet, Michael) *see* Approximation theory and wavelets
(Quezada Batalla, Roberto) *see* Congress: Mexican Mathematical Society, 2003e:00029 *and* Stochastic models, 2003f:00025
(Ramachandra, Kanakanahalli) *see* Number theory and discrete mathematics, 2003i:00009
(Rao, T. S. S. R. K.) *see* Functional analysis
(Real Jurado, Pedro) *see* Proceedings: Meeting of Andalusian Mathematicians, 2003a:00033 *and* 2003a:00034
(Rechtman, Raúl) *see* Workshop: Nonlinear Phenomena
(Recillas-Pishmish, Sevín) *see* Complex manifolds and hyperbolic geometry, 2003f:00020
(Rentería Márquez, Carlos) *see* Congress: Mexican Mathematical Society, 2003j:00022
(Rionero, Salvatore) *see* Conference: Waves and Stability in Continuous Media, 2003h:00015
(Rodrigues, E. R.) *see* Congress: Mexican Mathematical Society, 2003j:00022
(Roggenkamp, Klaus W.) *see* Conference: Algebra and Representation Theory
(Román-Roy, N.) *see* Proceedings: Workshop on Geometry and Physics, 2003e:00033
(Romero Jiménez, Álvaro) *see* Proceedings: Meeting of Andalusian Mathematicians, 2003a:00033 *and* 2003a:00034
(Ruan, Shi Gui) *see* Dynamical systems and their applications in biology, 2003k:00011
(Ruan, Yongbin) *see* Orbifolds in mathematics and physics, 2003g:00020
(Saari, Donald G.) *see* Mathematical challenges of the 21st century
(Saitō, Kimiaki) *see* Quantum information, 2003g:00025
(Sakharova, V. P.) *see* Algebra, 2003a:00019 *and* Conference: Pontryagin, Lev Semenovich, Algebra, 2003a:00022
(Saleh, Mohammad A.) *see* Mathematics & mathematics education, 2003a:00029
(Salvetti, Giuseppe) *see* Horizons in complex systems
(Sánchez Morgado, H.) *see* Congress: Mexican Mathematical Society, 2003e:00029
(Sanmartín, Esperanza) *see* Recent advances in Lie theory, 2003e:00034
(San Miguel Marco, Miguel) *see* Proceedings: Conference on Applied Mathematics and Statistics, 2003a:00031
(Sanniti di Baja, Gabriella) *see* Conference: Discrete Geometry for Computer Imagery
(Santander, Mariano) *see* Proceedings: Workshop on Geometry and Physics, 2003e:00032
(Sanz, Gerardo) *see* Proceedings: Conference on Applied Mathematics and Statistics, 2003a:00031
(Sato, Masako) *see* Meeting: Japanese Association of Mathematical Sciences
(Sburlan, Silviu) *see* Combinatorics, computability and logic, 2003d:00011
(Scedrov, A.) *see* Linear logic
(Scherzer, Otmar) *see* Inverse problems, image analysis, and medical imaging, 2003f:00021
(Schiavone, Peter) *see* Integral methods in science and engineering, 2003a:00028
(Schneider, Rolf) *see* Conference: Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science
(Schulze, Bert-Wolfgang) *see* Partial differential equations and spectral theory, 2003g:00021
(Shahrokhi, Farhad) *see* Discrete and computational geometry and graph drawing
(Shoji, Kunitaka) *see* Proceedings: Symposium on Algebra, Languages and Computation, 2003c:00023
(Shtrakov, Slavcho) *see* Discrete mathematics and applications, 2003d:00012
(Siddiqi, Abul Hasan) *see* Trends in industrial and applied mathematics, 2003h:00020
(Simon, Petr) *see* Proceedings: Topological Symposium, 2003b:00027
(Sisakyan, A. N.) *see* Symposium: Integrable Systems
(Slovák, Jan) *see* Proceedings: School on Geometry and Physics
(Song, Sung-Yell) *see* Conference: Association Schemes, Codes and Designs
(Soria, Fernando) *see* Proceedings: Conference on Harmonic Analysis and Partial Differential Equations
(Souček, Vladimír) *see* Clifford analysis and its applications, 2003a:00021
(Stanley, H. Eugene) *see* Horizons in complex systems
(Ştefănescu, Mirela) *see* Conference: Algebra and Representation Theory *and* Conference: Romanian Mathematical Society
(Stoka, Marius I.) *see* Conference: Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science
(Strasburger, Aleksander) *see* Geometry and analysis on finite- and infinite-dimensional Lie groups, 2003a:00024
(Sunada, Toshikazu) *see* Proceedings: Mathematical Conference, 2003a:00032
(Suppes, Patrick) *see* Stochastic causality, 2003f:00024
(Sy, Polly W.) *see* Proceedings: Mathematical Conference, 2003a:00032
(Székely, László A.) *see* Discrete and computational geometry and graph drawing
(Szücs, András) *see* Proceedings: Topology Conference
(Takayama, Nobuki) *see* Mathematical software, 2003d:00014
(Teicher, Mina) *see* Monodromy and differential equations
(Terwilliger, Paul) *see* Conference: Association Schemes, Codes and Designs
(Thagard, Paul) *see* Abduction and scientific discovery
(Tildesley, Dominic) *see* New science from high-performance computing
(Titi, Edriss S.) *see* Mathematics & mathematics education, 2003a:00029
(Todorov, M. D.) *see* Applications of mathematics in engineering and economics, 2003b:00022
(Tokuyama, Takeshi) *see* Conference: Computing and Combinatorics
(Torrea Hernández, José Luis) *see* Proceedings: Conference on Harmonic Analysis and Partial Differential Equations
(Trinchero, Roberto) *see* Quantum symmetries in theoretical physics and mathematics, 2003a:00036
(Văduva, Ion) *see* Proceedings: Conference of the Romanian Society of Probability and Statistics
(Vakhrameev, S. A.) *see* Algebra, 2003a:00019
(Van Huffel, Sabine) *see* Total least squares and errors-in-variables modeling, 2003g:00026
(Vargas, Ana) *see* Proceedings: Conference on Harmonic Analysis and Partial Differential Equations
(Verdera, Joan[1]) *see* Congress: Mathematics, 2003b:00023 *and* 2003b:00024
(Villegas-Blas, Carlos) *see* Congress: Mexican Mathematical Society, 2003j:00022
(Waldschmidt, Michel) *see* Number theory and discrete mathematics, 2003i:00009
(Watanabe, Hisako) *see* Forum of Ewha Women's U., Japan Women's U. and Ochanomizu U. for the Promotion of Education and Research in Science for Women in the 21st Century
(Wilson, Maggie) *see* New science from high-performance computing
(Wojtyński, Wojciech) *see* Geometry and analysis on finite- and infinite-dimensional Lie groups, 2003a:00024
(Wolkowicz, Gail S. K.) *see* Dynamical systems and their applications in biology, 2003k:00011
(Wu, Jian Hong) *see* Dynamical systems and their applications in biology, 2003k:00011
(Xambó-Descamps, Sebastian) *see* Congress: Mathematics, 2003b:00023 *and* 2003b:00024
(Xu, Xingwang) *see* Topology and geometry: commemorating SISTAG, 2003f:00026
(Yang, Le) *see* Proceedings: Mathematical Conference, 2003a:00032
(Yasugi, Mariko) *see* Meeting: Japanese Association of Mathematical Sciences
(Yau, Shing-Tung) *see* Mirror symmetry, 2003k:00012

Items listed otherwise than by author

Aachen ★ Proceedings of the Europhysics Conference on Computational Physics (CCP 2001).
Abduction and scientific discovery ★ Abduction and scientific discovery.
Adelaide ★ Kruskal 2000.
Algebra ★ Алгебра. (Russian) [Algebra] **2003a:00019**
Algebra and linear optimization ★ Алгебра и линейная оптимизация. (Russian) [Algebra and linear optimization] **2003c:00019**
Algebra and model theory ★ Algebra and model theory. 3. **2003a:00020**
Algebra, arithmetic and geometry ★ Algebra, arithmetic and geometry. Part I, II. **2003f:00019**
Algebraic combinatorics ★ Daisūteki kumiawase ron. [Algebraic combinatorics]
Amherst, MA ★ The 1998 Conference on Ordinal and Symbolic Data Analysis (OSDA '98).
Amritsar ★ Trends in industrial and applied mathematics. **2003h:00020**
Amsterdam ★ Proceedings of the Forty-Second European Study Group with Industry. **2003h:00018**
Analysis and logic *see* Henson, C. Ward et al., 2003m:00019
Anniversary:
Birth of Chernikov, Sergeĭ Nikolaevich ★ Алгебра и линейная оптимизация. (Russian) [Algebra and linear optimization] **2003c:00019**
Birth of Pontryagin, Lev Semenovich ★ Алгебра. (Russian) [Algebra] **2003a:00019** — ★ Pontryagin Conference. 8. Algebra. **2003a:00022**
Founding of the University of Architecture, Civil Engineering and Geodesy ★ Юбилейна Научна Конференция. Том 8. (Bulgarian) [Jubilee Scientific Conference. Vol. 8] **2003i:00008**
Laboratoire de Combinatoire et d'Informatique Mathématique (LaCIM) ★ LaCIM 2000 Conference on Combinatorics, Computer Science and Applications.
Applications of geometric algebra in computer science and engineering ★ Applications of geometric algebra in computer science and engineering. **2003b:00021**
Applications of mathematics in engineering and economics ★ Applications of mathematics in engineering and economics. **2003b:00022**
Approximation theory and wavelets ★ Approximation theory and wavelets.
Asilomar, CA ★ Origami[3]. **2003h:00017**
Austin, TX ★ Approximation theory and wavelets.

Bahía Blanca ★ Actas VI Congreso de Matematica "Dr. Antonio A. R. Monteiro". [Proceedings of the Sixth "Dr. Antonio A. R. Monteiro" Congress of Mathematics] **2003b:00026**
Baltimore, MD ★ Special issue on the Fourth CGC Workshop on Computational Geometry.
Banff, AB ★ Integral methods in science and engineering. **2003a:00028**
Bansko ★ Discrete mathematics and applications. **2003d:00012**
Barcelona ★ European Congress of Mathematics. Vol. I. **2003b:00023**
— ★ European Congress of Mathematics. Vol. II. **2003b:00024**
Bariloche ★ Quantum symmetries in theoretical physics and mathematics. **2003a:00036**
Będlewo ★ Geometry and analysis on finite- and infinite-dimensional Lie groups. **2003a:00024**
— ★ Mathematical aspects of modelling structure formation phenomena. **2003f:00022**
Beijing ★ Mathematical software. **2003d:00014**
— ★ Proceedings of the International Congress of Mathematicians. Vol. II. **2003i:00010a**
— ★ Proceedings of the International Congress of Mathematicians. Vol. III. **2003i:00010b**
Berlin ★ Special issue on the European Workshop on Computational Geometry—CG01.
Bertinoro ★ Stochastic causality. **2003f:00024**
Bethlehem ★ Mathematics & mathematics education. **2003a:00029**
Bratislava ★ Uncertainty modelling 2001.
Bucharest ★ Proceedings of the 5th Conference of the Romanian Society of Probability and Statistics.
Calcutta ★ Proceedings of the International Symposium on Mathematics and its Applications.
Cambridge ★ Applications of geometric algebra in computer science and engineering. **2003b:00021**
— ★ Rigidity in dynamics and geometry. **2003b:00029**
Canberra ★ Surveys in analysis and operator theory. **2003h:00019**
Cape Breton Island, NS ★ Dynamical systems and their applications in biology. **2003k:00011**
Castelvecchio Pascoli ★ Proceedings of the Euroconference on Partial Differential Equations and their Applications to Geometry and Physics.
Catania ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 9.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 1.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 2.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 4.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts, Part 6.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 8.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 7.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 5.
Chandigarh ★ Number theory and discrete mathematics. **2003i:00009**
Chişinău ★ {First Conference of the Mathematical Society of the Republic of Moldova}.
— ★ {First Conference of the Mathematical Society of the Republic of Moldova}.
Clausthal ★ Partial differential equations and spectral theory. **2003g:00021**
Clifford analysis and its applications ★ Clifford analysis and its applications. **2003a:00021**
Cluj-Napoca ★ International Conference on Nonlinear Operators, Differential Equations and Applications.
Cohomology theory of finite groups and related topics ★ Yūgen gun no kohomorogī ron no kenkyū. (Japanese) [Cohomology theory of finite groups and related topics]
Colloquium:
Differential Equations ★ Twelfth International Colloquium on Differential Equations.
— ★ Twelfth International Colloquium on Differential Equations.
— ★ Twelfth International Colloquium on Differential Equations.
Group Theoretical Methods in Physics ★ Symposium on Integrable Systems.
Lie Theory and Applications ★ Recent advances in Lie theory. **2003e:00034**
Quantum Groups ★ Quantum groups and integrable systems.
— ★ Quantum groups and integrable systems.
Columbia, SC ★ Discrete and computational geometry and graph drawing.
Combinatorics '98 ★ Combinatorics '98.
Combinatorics, computability and logic ★ Combinatorics, computability and logic. **2003d:00011**
Common ground between functional analysis and mathematical theory of information ★ Kansū kaisekigaku to sūri jōhō no setten. (Japanese) [Common ground between functional analysis and mathematical theory of information]
Complex manifolds and hyperbolic geometry ★ Complex manifolds and hyperbolic geometry. **2003f:00020**
Computer algebra—algorithms, implementations and applications ★ Computer algebra—algorithms, implementations and applications. (Japanese)
Conference:
Algebra and Representation Theory ★ Euroconference on Algebra and Representation Theory.
Applications of Malliavin Calculus in Finance ★ Conference on Applications of Malliavin Calculus in Finance.
Association Schemes, Codes and Designs ★ The 2000 Com^{2}MaC Conference on Association Schemes, Codes and Designs.
Combinatorics, Computer Science and Applications ★ LaCIM 2000 Conference on Combinatorics, Computer Science and Applications.
Computing and Combinatorics ★ Fifth Annual International Computing and Combinatorics Conference (COCOON'99).
Differential and Functional Differential Equations ★ {International Conference on Differential and Functional Differential Equations}.
Differential Equations and their Applications ★ Proceedings of EQUADIFF 10.
Differential Equations from Mechanics ★ {IMS Conference on Differential Equations from Mechanics}.
Discrete Geometry for Computer Imagery ★ 9th International Conference on Discrete Geometry for Computer Imagery (DGCI 2000).
Discrete Mathematics and Theoretical Computer Science ★ Combinatorics, computability and logic. **2003d:00011**
Dynamics of Continuous, Discrete and Impulsive Systems ★ {Second International Conference on Dynamics of Continuous, Discrete and Impulsive Systems}.
Conference: (*cont'd.*)
— ★ {Second International Conference on Dynamics of Continuous, Discrete and Impulsive Systems}.
Functional Analysis and its Applications ★ Functional analysis.
Industrial and Applied Mathematics of the Indian Subcontinent ★ Trends in industrial and applied mathematics. **2003h:00020**
Integrable Systems ★ Kruskal 2000.
Integrable Systems in Differential Geometry ★ Integrable systems, topology, and physics. **2003h:00016**
Jubilee Scientific, University of Architecture, Civil Engineering and Geodesy ★ Юбилейна Научна Конференция. Том 8. (Bulgarian) [Jubilee Scientific Conference. Vol. 8] **2003i:00008**
Mathematical and Computational Applications ★ {3rd International Conference on Mathematical and Computational Applications (ICMCA'2002)}.
Mathematical Aspects of Orbifold String Theory ★ Orbifolds in mathematics and physics. **2003g:00020**
Mathematical Society of the Republic of Moldova ★ {First Conference of the Mathematical Society of the Republic of Moldova}.
— ★ {First Conference of the Mathematical Society of the Republic of Moldova}.
Mathematics in Industry ★ Progress in industrial mathematics at ECMI 2000. **2003b:00028**
Model-Based Reasoning in Scientific Discovery ★ Abduction and scientific discovery.
Modelling and Simulation ★ MSSANZ/IMACS 13th Biennial Conference on Modelling and Simulation.
Nonlinear Operators, Differential Equations and Applications ★ International Conference on Nonlinear Operators, Differential Equations and Applications.
Ordinal and Symbolic Data Analysis ★ The 1998 Conference on Ordinal and Symbolic Data Analysis (OSDA '98).
Pontryagin, Lev Semenovich ★ Алгебра. (Russian) [Algebra] **2003a:00019**
Pontryagin, Lev Semenovich, Algebra ★ Pontryagin Conference. 8. Algebra. **2003a:00022**
Romanian Mathematical Society ★ Annual Conference of Romanian Mathematical Society.
Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science ★ IV International Conference in "Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science". Vol. I.
— ★ IV International Conference in "Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science". Vol. II.
Strings, Duality, and Geometry ★ Mirror symmetry. IV. **2003k:00012**
Waves and Stability in Continuous Media ★ "WASCOM 2001"—11th Conference on Waves and Stability in Continuous Media. **2003h:00015**
Congress:
Geometry ★ Complex manifolds and hyperbolic geometry. **2003f:00020**
Mathematics ★ European Congress of Mathematics. Vol. I. **2003b:00023**
— ★ European Congress of Mathematics. Vol. II. **2003b:00024**
Mexican Mathematical Society ★ XXXII Congreso Nacional de la Sociedad Matemática Mexicana. (Spanish) [XXXII National Congress of the Mexican Mathematical Society] **2003e:00029**
— ★ XXXIII Congreso Nacional de la Sociedad Matemática Mexicana. (Spanish) [XXXIII National Congress of the Mexican Mathematical Society] **2003e:00030**
— ★ XXXIV Congreso Nacional de la Sociedad Matemática Mexicana. (Spanish) [XXXIV National Congress of the Mexican Mathematical Society] **2003j:00022**
Constanţa ★ Combinatorics, computability and logic. **2003d:00011**
Constantza ★ Euroconference on Algebra and Representation Theory.
— ★ Annual Conference of Romanian Mathematical Society.
Contemporary Mathematics ★ Quantum symmetries in theoretical physics and mathematics. **2003a:00036**
— ★ Complex manifolds and hyperbolic geometry. **2003f:00020**
— ★ Inverse problems, image analysis, and medical imaging. **2003f:00021**
— ★ Topology and geometry: commemorating SISTAG. **2003f:00026**
— ★ Orbifolds in mathematics and physics. **2003g:00020**
— ★ Integrable systems, topology, and physics. **2003h:00016**
Contemporary trends in algebraic geometry and algebraic topology ★ Contemporary trends in algebraic geometry and algebraic topology. **2003g:00019**
Deformation of differential equations and asymptotic analysis ★ Bibun hōteishiki no henkei to zenkin kaiseki. (Japanese) [Deformation of differential equations and asymptotic analysis]
Deformation quantization ★ Deformation quantization. **2003a:00023**
Delhi ★ Discrete mathematics and allied topics [1911569].
Diliman ★ Proceedings of the Third Asian Mathematical Conference 2000. **2003a:00032**
Discrete and computational geometry and graph drawing ★ Discrete and computational geometry and graph drawing.
Discrete mathematics and allied topics ★ Discrete mathematics and allied topics [1911569].
Discrete mathematics and applications ★ Discrete mathematics and applications. **2003d:00012**
Dubna ★ Symposium on Integrable Systems.
Dubrovnik ★ Functional analysis VII. **2003j:00023**
Dynamical systems and their applications in biology ★ Dynamical systems and their applications in biology. **2003k:00011**
Dynamics of functional equations and related topics ★ Kansū hōteishiki no kai no dainamikusu to sono shūhen. [Dynamics of functional equations and related topics]
Ekaterinburg ★ Алгебра и линейная оптимизация. (Russian) [Algebra and linear optimization] **2003c:00019**
El Escorial ★ Proceedings of the 6th International Conference on Harmonic Analysis and Partial Differential Equations.
Erlogol ★ Algebra and model theory. 3. **2003a:00020**
Festschrift:
Harary, Frank ★ Combinatorics, computability and logic. **2003d:00011**
Kruskal, Martin David ★ Kruskal 2000.
Stanley, H. Eugene ★ Horizons in complex systems.

Forges-les-Eaux ★ Journées "Équations aux Dérivées Partielles". [Proceedings of the Conference on Partial Differential Equations] **2003j:00024**
Forum of Ewha Women's U., Japan Women's U. and Ochanomizu U. for the Promotion of Education and Research in Science for Women in the 21st Century ★ 3rd Joint Forum of Ewha Women's U., Japan Women's U. and Ochanomizu U. for the Promotion of Education and Research in Science for Women in the 21st Century.
Freiburg im Breisgau ★ 29th IEEE International Symposium on Multiple-Valued Logic. **2003a:00026**
Fukuoka ★ Proceedings of the Second ISAAC Congress. Vol. 2. **2003f:00023**
— ★ Proceedings of the Second ISAAC Congress. Vol. 1. **2003g:00024**
Functional analysis ★ Functional analysis VII. **2003j:00023**
— ★ Functional analysis.
General geometric topology and its applications ★ Ippan · kikagakuteki toporojī to sono ōyō no kenkyū. [General geometric topology and its applications] **2003c:00020**
Geometric mechanics ★ Kikagakuteki rikigakkei riron to sono shūhen. (Japanese) [Geometric mechanics]
Geometry and analysis on finite- and infinite-dimensional Lie groups ★ Geometry and analysis on finite- and infinite-dimensional Lie groups. **2003a:00024**
Geometry, integrability and quantization ★ Geometry, integrability and quantization. **2003m:00020**
Guadalajara ★ XXXII Congreso Nacional de la Sociedad Matemática Mexicana. (Spanish) [XXXII National Congress of the Mexican Mathematical Society] **2003e:00029**
Guanajuato ★ Modelos estocásticos II. [Stochastic models II] **2003f:00025**
— ★ Complex manifolds and hyperbolic geometry. **2003f:00020**
Gyula ★ Proceedings of the Janos Bolyai Mathematical Society 8th International Topology Conference.
Hamilton ★ MSSANZ/IMACS 13th Biennial Conference on Modelling and Simulation.
Harmonic, analytic function spaces and linear operators ★ Chōwa · kaiseki kansū kūkan to senkei sayōso II. (Japanese) [Harmonic, analytic function spaces and linear operators. II]
Hong Kong ★ {IMS Conference on Differential Equations from Mechanics}.
Horizons in complex systems ★ Horizons in complex systems.
Hyperbolic spaces and discrete groups ★ Sōkyoku kūkan oyobi risan gun no kenkyū II. [Hyperbolic spaces and discrete groups. II]
IEEE Symposium:
  Multiple-Valued Logic ★ 29th IEEE International Symposium on Multiple-Valued Logic. **2003a:00026**
  — ★ 30th IEEE International Symposium on Multiple-Valued Logic (ISMVL 2000). **2003a:00025**
Inequalities ★ Inequalities 2001.
Infinite dimensional analysis and quantum probability theory ★ Mugen jigen kaiseki to ryōshi kakuritsuron. [Infinite dimensional analysis and quantum probability theory] **2003a:00027**
Integrable systems, topology, and physics ★ Integrable systems, topology, and physics. **2003h:00016**
Integral methods in science and engineering ★ Integral methods in science and engineering. **2003a:00028**
Interfaces between fuzzy set theory and interval analysis ★ Interfaces between fuzzy set theory and interval analysis.
Inverse problems, image analysis, and medical imaging ★ Inverse problems, image analysis, and medical imaging. **2003f:00021**
Jaca ★ Actas de las V Jornadas Zaragoza-Pau de Matemática Aplicada y Estadística. [Proceedings of the Vth Zaragoza-Pau Conference on Applied Mathematics and Statistics] **2003a:00031**
Kolkata ★ Functional analysis.
Konya ★ {3rd International Conference on Mathematical and Computational Applications (ICMCA'2002)}.
Košice ★ Proceedings of the 7th International Scientific Conference. Section 1. **2003c:00022**
Kruskal ★ Kruskal 2000.
Leuven ★ Total least squares and errors-in-variables modeling. **2003g:00026**
Lhota nade Rohanovem ★ {30th Winter School on Abstract Analysis}.
Linear logic ★ Linear logic.
Litice u České Lípy ★ {30th Winter School on Abstract Analysis}.
London ★ New science from high-performance computing.
London, ON ★ {Second International Conference on Dynamics of Continuous, Discrete and Impulsive Systems}.
— ★ {Second International Conference on Dynamics of Continuous, Discrete and Impulsive Systems}.
Los Angeles, CA ★ Mathematical challenges of the 21st century.
Lucknow ★ Proceedings of the Second International Conference of the Society for Special Functions and their Applications (SSFA). Vol. II. **2003g:00022**
— ★ Proceedings of the Second International Conference of the Society for Special Functions and their Applications (SSFA). **2003g:00023**
Lutherstadt Wittenberg ★ 4th GAMM-Workshop "Stochastic Models and Control Theory".
Madison, WI ★ Orbifolds in mathematics and physics. **2003g:00020**
Mathematical aspects of modelling structure formation phenomena ★ Mathematical aspects of modelling structure formation phenomena. **2003f:00022**
Mathematical challenges of the 21st century ★ Mathematical challenges of the 21st century.
Mathematical decision making under uncertainty ★ Aimaisa to fukakujisei o fukumu jōkyō no sūriteki ishi kettei. (Japanese) [Mathematical decision making under uncertainty]
Mathematical methods and applications ★ Математические методы и приложения. (Russian) [Mathematical methods and applications] **2003d:00013**
Mathematical modelling and complex analysis ★ Математическое моделирование и комплексный анализ. (Russian) [Mathematical modelling and complex analysis] **2003b:00025**
— ★ Mathematical modelling and complex analysis. **2003c:00021**
Mathematical software ★ Mathematical software. **2003d:00014**
Mathematics & mathematics education ★ Mathematics & mathematics education. **2003a:00029**
Mathematics and computer science ★ Mathematics and computer science. II. **2003e:00031**
Matsue ★ Proceedings of the 5th Symposium on Algebra, Languages and Computation. **2003c:00023**
Max-plus algebras ★ Max-plus algebras.
Medina del Campo ★ Actas del Octavo Encuentro de Otoño de Geometría y Física. [Proceedings of the VIII Fall Workshop on Geometry and Physics] **2003e:00032**
Meeting:
  Algebra ★ IX Encontro em Álgebra USP/UNICAMP/UNESP. [IX Algebra Meeting USP/UNICAMP/UNESP]
  Japanese Association of Mathematical Sciences ★ {Japanese Association of Mathematical Sciences 2001 Annual Meeting}.
  Origami Science, Mathematics and Education ★ Origami^3. **2003h:00017**
  Philosophy of Science Association ★ PSA 2000. Part II.
  Theoretical Physicists and Mathematicians ★ Deformation quantization. **2003a:00023**
Messina ★ Horizons in complex systems.
Millennium problems ★ Die Millenniumsprobleme. (German) [The millennium problems]
Millenniumsprobleme ★ Die Millenniumsprobleme. (German) [The millennium problems]
Mirror symmetry ★ Mirror symmetry. IV. **2003k:00012**
Model theory via geometric approach ★ Kikateki moderu riron no kenkyū. (Japanese) [Model theory via geometric approach]
Monodromy and differential equations ★ Monodromy and differential equations.
Mons *see* **Henson, C. Ward et al., 2003m:00019**
Montreal, QC ★ Mirror symmetry. IV. **2003k:00012**
— ★ LaCIM 2000 Conference on Combinatorics, Computer Science and Applications.
Morelos ★ VII Latin American Workshop on Nonlinear Phenomena.
Moscow ★ Математические методы и приложения. (Russian) [Mathematical methods and applications] **2003d:00013**
— ★ Алгебра. (Russian) [Algebra] **2003a:00019**
— ★ Pontryagin Conference. 8. Algebra. **2003a:00022**
— ★ {International Conference on Differential and Functional Differential Equations}.
— ★ Monodromy and differential equations.
Mumbai ★ Algebra, arithmetic and geometry. Part I, II. **2003f:00019**
Nagoya ★ Quantum information IV. **2003g:00025**
New Orleans, LA ★ Inverse problems, image analysis, and medical imaging. **2003f:00021**
New science from high-performance computing ★ New science from high-performance computing.
Nonlinear analysis and convex analysis ★ Hisenkei kaisekigaku to totsu kaisekigaku no kenkyū. [Nonlinear analysis and convex analysis] **2003a:00030**
Nonlinear problems in industry, domain decomposition methods and numerical simulations ★ Sangyō ue no hisenkei mondai to sūchi shimyurēshon to ryōiki bunkatsuhō. (Japanese) [Nonlinear problems in industry, domain decomposition methods and numerical simulations]
Number theory and discrete mathematics ★ Number theory and discrete mathematics. **2003i:00009**
Okayama ★ Special issue on industrial and applied mathematics.
Orbifolds in mathematics and physics ★ Orbifolds in mathematics and physics. **2003g:00020**
Origami^3 ★ Origami^3. **2003h:00017**
Palermo ★ Progress in industrial mathematics at ECMI 2000. **2003b:00028**
— ★ Combinatorics '98.
Partial differential equations and spectral theory ★ Partial differential equations and spectral theory. **2003g:00021**
Pavia ★ Abduction and scientific discovery.
Plovdiv ★ Twelfth International Colloquium on Differential Equations.
— ★ Twelfth International Colloquium on Differential Equations.
— ★ Twelfth International Colloquium on Differential Equations.
Pohang ★ The 2000 Com^{2}MaC Conference on Association Schemes, Codes and Designs.
Portland, OR ★ 30th IEEE International Symposium on Multiple-Valued Logic (ISMVL 2000). **2003a:00025**
Porto Ercole ★ "WASCOM 2001"—11th Conference on Waves and Stability in Continuous Media. **2003h:00015**
Poznan ★ Random structures and algorithms.
Prague ★ Clifford analysis and its applications. **2003a:00021**
— ★ Quantum groups and integrable systems.
— ★ Proceedings of the Ninth Prague Topological Symposium. **2003b:00027**
— ★ Quantum groups and integrable systems.
— ★ Proceedings of EQUADIFF 10.
Proceedings:
  Conference of the Romanian Society of Probability and Statistics ★ Proceedings of the 5th Conference of the Romanian Society of Probability and Statistics.
  Conference of the Society for Special Functions and their Applications (SSFA) ★ Proceedings of the Second International Conference of the Society for Special Functions and their Applications (SSFA). Vol. II. **2003g:00022**
  — ★ Proceedings of the Second International Conference of the Society for Special Functions and their Applications (SSFA). **2003g:00023**
  Conference on Applied Mathematics and Statistics ★ Actas de las V Jornadas Zaragoza-Pau de Matemática Aplicada y Estadística. [Proceedings of the Vth Zaragoza-Pau Conference on Applied Mathematics and Statistics] **2003a:00031**
  Conference on Computational Physics ★ Proceedings of the Europhysics Conference on Computational Physics (CCP 2001).
  Conference on Harmonic Analysis and Partial Differential Equations ★ Proceedings of the 6th International Conference on Harmonic Analysis and Partial Differential Equations.
  Conference on Partial Differential Equations ★ Journées "Équations aux Dérivées Partielles". [Proceedings of the Conference on Partial Differential Equations] **2003j:00024**
  Conference on Validated Computing ★ Proceedings of the Validated Computing 2002 Conference.
  Congress of Mathematicians ★ Proceedings of the International Congress of Mathematicians. Vol. II. **2003i:00010a**

Proceedings: (*cont'd.*)
— ★ Proceedings of the International Congress of Mathematicians. Vol. III. **2003i:00010b**
Congress of Mathematics ★ Actas VI Congreso de Matematica "Dr. Antonio A. R. Monteiro". [Proceedings of the Sixth "Dr. Antonio A. R. Monteiro" Congress of Mathematics] **2003b:00026**
Congress of Nonlinear Analysts ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 9.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 1.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 2.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 4.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts, Part 6.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 8.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 7.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 3.
— ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 5.
EQUADIFF ★ Proceedings of EQUADIFF 10.
Euroconference on Partial Differential Equations and their Applications to Geometry and Physics ★ Proceedings of the Euroconference on Partial Differential Equations and their Applications to Geometry and Physics.
ISAAC Congress ★ Proceedings of the Second ISAAC Congress. Vol. 2. **2003f:00023**
— ★ Proceedings of the Second ISAAC Congress. Vol. 1. **2003g:00024**
Mathematical Conference ★ Proceedings of the Third Asian Mathematical Conference 2000. **2003a:00032**
Meeting of Andalusian Mathematicians ★ Actas del Encuentro de Matemáticos Andaluces. Vol. I. (Spanish) [Proceedings of the Meeting of Andalusian Mathematicians. Vol. I.] **2003a:00033**
— ★ Actas del Encuentro de Matemáticos Andaluces. Vol. II. (Spanish) [Proceedings of the Meeting of Andalusian Mathematicians. Vol. II] **2003a:00034**
School on Geometry and Physics ★ Proceedings of the 21st Winter School "Geometry and Physics".
— ★ Proceedings of the 22nd Winter School "Geometry and Physics".
Scientific Conference ★ Proceedings of the 7th International Scientific Conference. Section 1. **2003c:00022**
Study Group with Industry ★ Proceedings of the Forty-Second European Study Group with Industry. **2003h:00018**
Symposium on Algebra, Languages and Computation ★ Proceedings of the 5th Symposium on Algebra, Languages and Computation. **2003c:00023**
Symposium on Mathematics and its Applications ★ Proceedings of the International Symposium on Mathematics and its Applications.
Topological Symposium ★ Proceedings of the Ninth Prague Topological Symposium. **2003b:00027**
Topology Conference ★ Proceedings of the Janos Bolyai Mathematical Society 8th International Topology Conference.
Workshop on Algebraic Geometry and Integrable Systems related to String Theory ★ Proceedings of the Workshop "Algebraic Geometry and Integrable Systems related to String Theory". **2003a:00035**
Workshop on Geometry and Physics ★ Actas del Octavo Encuentro de Otoño de Geometría y Física. [Proceedings of the VIII Fall Workshop on Geometry and Physics] **2003e:00032**
— ★ Proceedings of the IX Fall Workshop on Geometry and Physics. **2003e:00033**
Progress in industrial mathematics at ECMI 2000 ★ Progress in industrial mathematics at ECMI 2000. **2003b:00028**
Progress in Mathematics ★ European Congress of Mathematics. Vol. I. **2003b:00023**
— ★ European Congress of Mathematics. Vol. II. **2003b:00024**
PSA ★ PSA 2000. Part II.
Quantum groups and integrable systems ★ Quantum groups and integrable systems.
— ★ Quantum groups and integrable systems.
Quantum information ★ Quantum information IV. **2003g:00025**
Quantum symmetries in theoretical physics and mathematics ★ Quantum symmetries in theoretical physics and mathematics. **2003a:00036**
Random structures and algorithms ★ Random structures and algorithms.
Recent advances in Lie theory ★ Recent advances in Lie theory. **2003e:00034**
Rigidity in dynamics and geometry ★ Rigidity in dynamics and geometry. **2003b:00029**
Rocquencourt ★ Conference on Applications of Malliavin Calculus in Finance.
Saltillo ★ XXXIII Congreso Nacional de la Sociedad Matemática Mexicana. (Spanish) [XXXIII National Congress of the Mexican Mathematical Society] **2003e:00030**
São Pedro ★ IX Encontro em Álgebra USP/UNICAMP/UNESP. [IX Algebra Meeting USP/UNICAMP/UNESP]
School:
Abstract Analysis ★ {30th Winter School on Abstract Analysis}.
Intermediate Problems of Model Theory and Universal Algebra ★ Algebra and model theory. 3. **2003a:00020**
Physics ★ Международная Школа Физики имени В. А. Фока. (Russian) [V. A. Fok International School of Physics]
Scientific and engineering computations for the 21st century ★ Scientific and engineering computations for the 21st century.
Scientific and engineering computations for the 21st century—methodologies and applications ★ Scientific and engineering computations for the 21st century—methodologies and applications.
Seminar:
Bourbaki ★ Séminaire Bourbaki. Vol. 2000/2001. (French) [Bourbaki Seminar. Vol. 2000/2001]
Spectral Theory and Geometry ★ Séminaire de Théorie Spectrale et Géométrie. Vol. 19. Année 2000–2001. [Seminar on Spectral Theory and Geometry. Vol. 19. Year 2000–2001] **2003a:00037**
Session:
Interaction of Inverse Problems and Image Analysis ★ Inverse problems, image analysis, and medical imaging. **2003f:00021**
Sevilla ★ Actas del Encuentro de Matemáticos Andaluces. Vol. I. (Spanish) [Proceedings of the Meeting of Andalusian Mathematicians. Vol. I.] **2003a:00033**
— ★ Actas del Encuentro de Matemáticos Andaluces. Vol. II. (Spanish) [Proceedings of the Meeting of Andalusian Mathematicians. Vol. II] **2003a:00034**
Shizuoka ★ Scientific and engineering computations for the 21st century—methodologies and applications.
— ★ Scientific and engineering computations for the 21st century.
Sofia ★ Юбилейна Научна Конференция. Том 8. (Bulgarian) [Jubilee Scientific Conference. Vol. 8] **2003i:00008**
Sozopol ★ Applications of mathematics in engineering and economics. **2003b:00022**
Special Issue:
Discrete and computational geometry ★ Special issue on discrete and computational geometry.
Industrial and applied mathematics ★ Special issue on industrial and applied mathematics.
Spectral and scattering theory and related topics ★ Supeku toru· sanran riron to sono shūhen. [Spectral and scattering theory and related topics]
Srní ★ Proceedings of the 21st Winter School "Geometry and Physics".
— ★ Proceedings of the 22nd Winter School "Geometry and Physics".
St. Petersburg ★ Международная Школа Физики имени В. А. Фока. (Russian) [V. A. Fok International School of Physics]
Stanford, CA ★ Stochastic causality. **2003f:00024**
Stochastic causality ★ Stochastic causality. **2003f:00024**
Stochastic models ★ Modelos estocásticos II. [Stochastic models II] **2003f:00025**
Strasbourg ★ Deformation quantization. **2003a:00023**
Sts. Constantine and Elena ★ Geometry, integrability and quantization. **2003m:00020**
Surveys in analysis and operator theory ★ Surveys in analysis and operator theory. **2003h:00019**
Symposium:
Integrable Systems ★ Symposium on Integrable Systems.
Mathematical Physics ★ XXXIII Symposium on Mathematical Physics.
Probability and Stochastic Processes ★ Modelos estocásticos II. [Stochastic models II] **2003f:00025**
Tennoji ★ {Japanese Association of Mathematical Sciences 2001 Annual Meeting}.
Theoretical development and feasibility of mathematical analysis on the computer ★ Sūgaku kaiseki no keisanki ue de no rironteki tenkai to sono suikō kanōsei. (Japanese) [Theoretical development and feasibility of mathematical analysis on the computer]
Tianjin ★ Contemporary trends in algebraic geometry and algebraic topology. **2003g:00019**
Timişoara ★ Inequalities 2001.
Tokyo ★ Integrable systems, topology, and physics. **2003h:00016**
— ★ 3rd Joint Forum of Ewha Women's U., Japan Women's U. and Ochanomizu U. for the Promotion of Education and Research in Science for Women in the 21st Century.
— ★ Special issue on discrete and computational geometry.
— ★ Fifth Annual International Computing and Combinatorics Conference (COCOON'99).
— ★ Linear logic.
Toluca ★ XXXIV Congreso Nacional de la Sociedad Matemática Mexicana. (Spanish) [XXXIV National Congress of the Mexican Mathematical Society] **2003j:00022**
Topics in Young diagrams and representation theory ★ Young zukei o meguru wadai to hyōgen ron. [Topics in Young diagrams and representation theory]
Topology and geometry: commemorating SISTAG ★ Topology and geometry: commemorating SISTAG. **2003f:00026**
Toronto, ON ★ Proceedings of the Validated Computing 2002 Conference.
Torún ★ XXXIII Symposium on Mathematical Physics.
Total least squares and errors-in-variables modeling ★ Total least squares and errors-in-variables modeling. **2003g:00026**
Transformation groups from new points of view ★ Atarashî kanten kara mita henkan gun ron. (Japanese) [Transformation groups from new points of view]
Trends in industrial and applied mathematics ★ Trends in industrial and applied mathematics. **2003h:00020**
Trends in infinite-dimensional analysis and quantum probability ★ Mugen jigen kaiseki to ryōshi kakuritsuron no dōkō. [Trends in infinite-dimensional analysis and quantum probability]
Tropea ★ IV International Conference in "Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science". Vol. I.
— ★ IV International Conference in "Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science". Vol. II.
Uncertainty modelling ★ Uncertainty modelling 2001.
Uppsala ★ 9th International Conference on Discrete Geometry for Computer Imagery (DGCI 2000).
Vancouver, BC ★ PSA 2000. Part II.
Variational problems and related topics ★ Hembun mondai to sono shūhen. [Variational problems and related topics] **2003a:00038**
Versailles ★ Mathematics and computer science. II. **2003e:00031**
Vigo ★ Recent advances in Lie theory. **2003e:00034**
Vilanova i la Geltrú ★ Proceedings of the IX Fall Workshop on Geometry and Physics. **2003e:00033**
Vilnius ★ Mathematical modelling and complex analysis. **2003c:00021**
Vil'nyus ★ Математическое моделирование и комплексный анализ. (Russian) [Mathematical modelling and complex analysis] **2003b:00025**
Warsaw ★ Mathematical aspects of modelling structure formation phenomena. **2003f:00022**
Workshop:
Computational Geometry ★ Special issue on the Fourth CGC Workshop on Computational Geometry.
— ★ Special issue on the European Workshop on Computational Geometry—CG01.
Lie Groups and Lie Algebras ★ Geometry and analysis on finite- and infinite-dimensional Lie groups. **2003a:00024**
Nonlinear Phenomena ★ VII Latin American Workshop on Nonlinear Phenomena.

Workshop: (*cont'd.*)
Stochastic Models and Control Theory ★ 4th GAMM-Workshop "Stochastic Models and Control Theory".
Stochastic Numerics ★ Kakuritsu sūchi kaiseki ni okeru sho mondai. V. [5th Workshop on Stochastic Numerics] **2003a:00039**
TLS and EIV Modeling ★ Total least squares and errors-in-variables modeling. **2003g:00026**

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(Banyaga, Augustin) *see* **Infinite dimensional Lie groups in geometry and representation theory, 2003c:58001**
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Dedicated to Jim Douglas, Jr. on the occasion of his 75th birthday ★ Dedicated to Jim Douglas, Jr. on the occasion of his 75th birthday.
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01–XX History and biography [see also the classification number –03 in the other sections]

01–00 General reference works (handbooks, dictionaries, bibliographies, etc.)

Deac, Iuliu ★ Dicţionar enciclopedic al matematicienilor. Vol. 1. (Romanian) [Encyclopedic dictionary of mathematicians. Vol. 1] **2003f:01001**
Dönmez, Ali ★ Matematiğin öyküsü ve serüveni. (Turkish. Turkish summary) [The story and adventures of mathematics]
(Georgescu, Adelina) *see* **Deac, Iuliu**, **2003f:01001**
(Shanker, Stuart G.) *see* **Philosophy of science, logic and mathematics in the twentieth century**, **2003b:01001**

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Dictionary:
Mathematicians *see* **Deac, Iuliu**, **2003f:01001**
Philosophy of science, logic and mathematics in the twentieth century ★ Philosophy of science, logic and mathematics in the twentieth century. **2003b:01001**

Items with secondary classifications in 01–00

(Dauben, Joseph W.) *see* **Writing the history of mathematics: its historical development**, **2003m:01063**
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01–01 Instructional exposition (textbooks, tutorial papers, etc.)

Malysheva, L. N. *see* **Sviridyuk, G. A. et al.**, **2003k:01001**
(Sanchez Rodrigues, Luis) *see* **Sebastião e Silva, José**, **2003h:01001**
Sebastião e Silva, José ★ A matemática na antiguidade. (Portuguese) [Mathematics in antiquity] **2003h:01001**
Sviridyuk, G. A. (*with* Malysheva, L. N.; Zagrebina, S. A.) ★ Лекции по истории математики. (Russian) [Lectures in the history of mathematics] **2003k:01001**
Zagrebina, S. A. *see* **Sviridyuk, G. A. et al.**, **2003k:01001**

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Bewersdorff, Jörg ★ Algebra für Einsteiger. (German. German summary) [Algebra for beginners] **2003i:12001**
(Brown, Joseph E.) *see* **Calinger, Ronald**, **2003d:01004**
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Garrity, Thomas A. ★ All the mathematics you missed. (English summary) **2003f:00002**
(West, Thomas R.) *see* **Calinger, Ronald**, **2003d:01004**

01–02 Research exposition (monographs, survey articles)

Items with secondary classifications in 01–02

Dolbeault, Pierre 30 ans de géométrie analytique: sur les travaux de J.-B. Poly. [Thirty years of analytic geometry: the works of J.-B. Poly] **2003k:32002**
(Poly, Jean-Baptiste) *see* **Dolbeault, Pierre**, **2003k:32002**

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Bibliography:
Poly, Jean-Baptiste *see* **Dolbeault, Pierre**, **2003k:32002**

01–06 Proceedings, conferences, collections, etc.

(Bečvář, Jindřich) *see* **Mathematics in the 16th and 17th centuries**, **2003a:01001**; **Man—art—mathematics**, **2003b:01002**; **Mathematics throughout the ages**, **2003b:01003** *and* **2003c:01001**
(Biard, Joël) *see* **Scientific doctrines from antiquity to the classical era**, **2003d:01003**
(De Freitas, Antonio) *see* **History and philosophy of mathematics**
(Djebbar, Ahmed) *see* **Science, technology and industry in the Ottoman world**, **2003b:01004**
(Euler, Leonhard) *see* **On the history of mathematics in the eighteenth century**, **2003d:01001** *and* **2003d:01002**
(Fuchs, Eduard) *see* **Mathematics in the 16th and 17th centuries**, **2003a:01001**; **Man—art—mathematics**, **2003b:01002**; **Mathematics throughout the ages**, **2003b:01003** *and* **2003c:01001**
(Galilei, Galileo) *see* **Philosophy on a wide scale**, **2003k:01002**
(Goldstein, Bernard R.) *see* **New foundations in the history of astronomy**
(Günergun, Feza) *see* **Science, technology and industry in the Ottoman world**, **2003b:01004** *and* **Science in Islamic civilisation**, **2003m:01001**
(Idlis, G. M.) *see* **Research in the history of astronomy**, **2003i:01001** *and* **2003i:01002**
(İhsanoğlu, Ekmeleddin) *see* **Science, technology and industry in the Ottoman world**, **2003b:01004** *and* **Science in Islamic civilisation**, **2003m:01001**
(Lützen, Jesper) *see* **Around Caspar Wessel and the geometric representation of complex numbers**
(Matvievskaya, G. P.) *see* **On the history of mathematics in the eighteenth century**, **2003d:01001** *and* **2003d:01002**
(Montesinos, José) *see* **Philosophy on a wide scale**, **2003k:01002**
(Rashed, Roshdi) *see* **Scientific doctrines from antiquity to the classical era**, **2003d:01003**
(Reich, Karin) *see* **Hamburg contributions to the history of mathematics**
(Solís Santos, Carlos) *see* **Philosophy on a wide scale**, **2003k:01002**
(Tischel, Gerhard) *see* **Hamburg contributions to the history of mathematics**
(Wessel, Caspar) *see* **Around Caspar Wessel and the geometric representation of complex numbers**

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Anniversary:
Birth of Euler, Leonhard ★ Из истории математики XVIII века. Вып. 1. (Russian) [On the history of mathematics in the eighteenth century. No. 1] **2003d:01001**
—★ Из истории математики XVIII века. Вып. 2. (Russian) [On the history of mathematics in the eighteenth century. No. 2] **2003d:01002**
Around Caspar Wessel and the geometric representation of complex numbers ★ Around Caspar Wessel and the geometric representation of complex numbers.
Červen ★ Člověk—umění—matematika. (Czech) [Man—art—mathematics] **2003b:01002**
Congress:
History of Science ★ Science, technology and industry in the Ottoman world. **2003b:01004**
Copenhagen ★ Around Caspar Wessel and the geometric representation of complex numbers.
Doctrines de la science de l'antiquité à l'âge classique ★ Les doctrines de la science de l'antiquité à l'âge classique. (French) [Scientific doctrines from antiquity to the classical era] **2003d:01003**
Festschrift:
Goldstein, Bernard R. ★ New foundations in the history of astronomy.
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History and philosophy of mathematics ★ Historia y filosofía de la matemática. (Spanish) [History and philosophy of mathematics]
Istanbul ★ Science in Islamic civilisation. **2003m:01001**
Jevíčko ★ Matematika v 16. a 17. století. (Czech) [Mathematics in the 16th and 17th centuries] **2003a:01001**
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New foundations in the history of astronomy ★ New foundations in the history of astronomy.
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Philosophy on a wide scale ★ Largo campo di filosofare. [Philosophy on a wide scale] **2003k:01002**
Pittsburgh, PA ★ New foundations in the history of astronomy.
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History of Mathematics ★ Člověk—umění—matematika. (Czech) [Man—art—mathematics] **2003b:01002**
Science in Islamic civilisation ★ Science in Islamic civilisation. **2003m:01001**
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Seminar:
History of Mathematics ★ Matematika v 16. a 17. století. (Czech) [Mathematics in the 16th and 17th centuries] **2003a:01001**
Study of the history of mathematics ★ Sūgaku shi no kenkyū. [Study of the history of mathematics]
Symposium:
Galileo ★ Largo campo di filosofare. [Philosophy on a wide scale] **2003k:01002**
Science and Technology in the Turkish and Islamic World ★ Science in Islamic civilisation. **2003m:01001**
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(Andreev, A. F.) *see* **Kapitsa, Tamm, Semenov in biographical sketches and letters**, **2003j:01041**
(Balashov, Yu. V.) *see* **Einstein studies in Russia**, **2003m:00022**
Bečvář, Jindřich (*with* et al.) ★ Matematika ve středověké Evropě. (Czech) [Mathematics in medieval Europe] **2003f:01010**
(Byalko, A. V.) *see* **Kapitsa, Tamm, Semenov in biographical sketches and letters**, **2003j:01041**
(Detlefsen, Michael) *see* **Logicism and the paradoxes: a reappraisal**
(Einstein, Albert) *see* **Einstein studies in Russia**, **2003m:00022**
(Glock, Hans-Johann) *see* **Wittgenstein: a critical reader**, **2003k:01022**
(Gonzalez, Wenceslao J.) *see* **Lakatos's philosophy today**, **2003i:01029**

(Hendricks, Vincent Fella) *see* **Proof theory**, **2003a:03009** *and* **Probability theory**, **2003i:60001**
(Jørgensen, Klaus Frovin) *see* **Proof theory**, **2003a:03009** *and* **Probability theory**, **2003i:60001**
(Kapitsa, P. L.) *see* **Kapitsa, Tamm, Semenov in biographical sketches and letters**, **2003j:01041**
(Lakatos, Imre) *see* **Lakatos's philosophy today**, **2003i:01029**
(Parshall, Karen Hunger) *see* **Mathematics unbound: the evolution of an international mathematical research community**, **2003g:01053**
(Pedersen, Stig Andur) *see* **Proof theory**, **2003a:03009** *and* **Probability theory**, **2003i:60001**
(Rice, Adrian C.) *see* **Mathematics unbound: the evolution of an international mathematical research community**, **2003g:01053**
(Semenov, N. N.) *see* **Kapitsa, Tamm, Semenov in biographical sketches and letters**, **2003j:01041**
(Tamm, I. E.) *see* **Kapitsa, Tamm, Semenov in biographical sketches and letters**, **2003j:01041**
(Uspenskaya, N. V.) *see* **Kapitsa, Tamm, Semenov in biographical sketches and letters**, **2003j:01041**
(Vizgin, Vladimir P.) *see* **Einstein studies in Russia**, **2003m:00022**
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Biography:
Kapitsa, Petr Leonidovich ★ Капица, Тамм, Семенов в очерках и письмах. (Russian) [Kapitsa, Tamm, Semenov in biographical sketches and letters] **2003j:01041**
Semenov, Nikolaĭ Nikolaevich ★ Капица, Тамм, Семенов в очерках и письмах. (Russian) [Kapitsa, Tamm, Semenov in biographical sketches and letters] **2003j:01041**
Tamm, Igor′ Evgen′evich ★ Капица, Тамм, Семенов в очерках и письмах. (Russian) [Kapitsa, Tamm, Semenov in biographical sketches and letters] **2003j:01041**
Charlottesville, VA ★ Mathematics unbound: the evolution of an international mathematical research community, 1800–1945. **2003g:01053**
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Lakatos's philosophy today ★ Lakatos's philosophy today. **2003i:01029**
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Probability theory ★ Probability theory. **2003i:60001**
Proof theory ★ Proof theory. **2003a:03009**
Roskilde ★ Proof theory. **2003a:03009**
— ★ Probability theory. **2003i:60001**
Seminar:
History of Mathematics *see* **Bečvář, Jindřich**, **2003f:01010**
Wittgenstein: a critical reader ★ Wittgenstein: a critical reader. **2003k:01022**

01Axx History of mathematics and mathematicians

01A05 General histories, source books

Alberts, Gerard (*with* Koetsier, Teun; Bolten, Godelieve) Scraps with formulas. (Dutch. Dutch summary)
Andersen, Kirsti Scandinavia. (*see* **2003m:01063**)
Ausejo, Elena (*with* Hormigón, Mariano) Spain. (*see* **2003m:01063**)
Binder, Christa Austria. (*see* **2003m:01063**)
Blair, Ann *see* **Kruja, Eriola et al.**, (**2003k:68004**)
Bockstaele, Paul Benelux. (*see* **2003m:01063**)
Bolten, Godelieve *see* **Alberts, Gerard et al.**
Bottazzini, Umberto Italy. (*see* **2003m:01063**)
(Brown, Joseph E.) *see* **Calinger, Ronald**, **2003d:01004**
Calinger, Ronald ★ A contextual history of mathematics. **2003d:01004**
(Cardinael, Sybrandt) *see* **van Maanen, Jan**
Čižmár, Ján The origin and development of algebraic geometry. (Slovak) **2003f:01002**
(Clucas, Stephen) *see* **Rossi, Paolo²**, **2003a:01004**
Courgeau, Daniel Évolution ou révolutions dans la pensée démographique? (English and French summaries) [Evolution or revolutions in demographic thinking?]
D'Ambrosio, Ubiratan (*with* Garciadiego, Alejandro R.; Dauben, Joseph W.; Fraser, Craig G.) The Americas. (*see* **2003m:01063**)
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Demidov, Sergeĭ S. Russia and the U.S.S.R. (*see* **2003m:01063**)
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Folkerts, Menso (*with* Scriba, Christoph J.; Wussing, Hans) Germany. (*see* **2003m:01063**)
Franklin, James ★ The science of conjecture. (English summary) **2003c:01002**
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Freites, Yajaira A historical sketch of mathematics in Venezuela. I. From colonial times to the late nineteenth century. (Spanish) **2003a:01002**
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Gingras, Yves What did mathematics do to physics? **2003c:01003**
Gladwell, Graham M. L. Seminal ideas in integral methods. **2003c:01004**
Grattan-Guinness, Ivor The British Isles. (*see* **2003m:01063**)
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Høyrup, Jens On a collection of geometrical riddles and their role in the shaping of four to six "algebras". (English summary) **2003b:01005**
Klotzek, Benno Stetigkeit und Unstetigkeit in der Geometrie. [Continuity and discontinuity in geometry] **2003a:01003**
Knorr, Wilbur R. The impact of modern mathematics on ancient mathematics. (English and French summaries) **2003d:01005**
Koetsier, Teun *see* **Alberts, Gerard et al.**
Kopáčková, Alena Phylogenesis of the concept of a function. (Czech) **2003k:01003**
Kruja, Eriola (*with* Marks, Joe; Blair, Ann; Waters, Richard) A short note on the history of graph drawing. (English summary) (*see* **2003k:68004**)
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Marks, Joe *see* **Kruja, Eriola et al.**, (**2003k:68004**)
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Shanker, Stuart G. Descartes' legacy: the mechanist/vitalist debates. (*see* **2003b:01001**)
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Cardinael, Sybrandt *see* **van Maanen, Jan**
Mathematical evolutions ★ Mathematical evolutions. **2003g:01004**

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Brown, Ezra (*with* Myers, Bruce T.) Elliptic curves from Mordell to Diophantus and back. **2003d:11080**
Buse, A. The rise and fall of extraneous estimation: lessons from econometric history? (English summary)
Cellucci, Carlo The growth of mathematical knowledge: an open world view. **2003j:00010**
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Frascolla, Pasquale Philosophy of mathematics. (*see* **2003k:01022**)
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Gillies, Donald A. An empiricist philosophy of mathematics and its implications for the history of mathematics. **2003h:00005**
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Lepka, Karel ★ Historie Fermatových kvocientů. (Czech) [History of Fermat quotients] **2003a:11002**
Li, Guo Ying¹ On statistical analysis for higher-dimensional, dependent and incomplete data sets. (Chinese. English and Chinese summaries)
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Magnani, Lorenzo ★ Philosophy and geometry. **2003b:00008**
Marsden, Jerrold E. (*with* Weinstein, Alan) Comments on the history, theory, and applications of symplectic reduction. (English summary) **2003h:53119**
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Mawhin, Jean L'éternel retour des sommes de Riemann-Stieltjes dans l'évolution du calcul intégral. (English summary) [The eternal return of Riemann-Stieltjes sums in the evolution of the integral calculus] **2003e:28001**
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Pak, Hong Kyung (*with* Jang, Lee-Chae; Kim, Taekyun; Rim, Seog Hoon) On education of mathematics by using the history of mathematics. (Korean. English summary)
Parks, Harold R. *see* **Krantz, Steven G.**, **2003f:26001**
Potter, Michael ★ Reason's nearest kin. (English summary) **2003b:03005**
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Sasaki, Chikara Japan. (*see* **2003m:01063**)
(Schmieden, Curt) *see* **Spalt, Detlef D.**, **2003c:01038**
(Scriba, Christoph J.) *see* **Writing the history of mathematics: its historical development**, **2003m:01063**
Soss, Michael (*with* Toussaint, Godfried T.) Convexifying polygons in 3D: a survey. (English summary) **2003m:52004**
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01A07 Ethnomathematics, general

Ascher, Marcia ★ Mathematics elsewhere. (English summary) **2003f:01004**
Chemillier, Marc Ethnomusicology, ethnomathematics. The logic underlying orally transmitted artistic practices.

01A12 Indigenous cultures of the Americas

Castro Gutierrez, F. Mathematical elements in the Inca civilization. (Spanish. Spanish summary)
Christensen, Antje The Incan quipus. (English summary) **2003m:01002**
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Fraser, Craig G. *see* **D'Ambrosio, Ubiratan et al.**, (**2003m:01063**)
Garciadiego, Alejandro R. *see* **D'Ambrosio, Ubiratan et al.**, (**2003m:01063**)

01A16 Egyptian

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Boolos, George S. (*with* Burgess, John P.; Jeffrey, Richard C.) ★ Computability and logic. (English summary) **2003a:03001**
Burgess, John P. *see* **Boolos, George S. et al., 2003a:03001**
Cori, René (*with* Lascar, Daniel) ★ Mathematical logic. (English summary) **2003e:03001**
— (*with* Lascar, Daniel) ★ Mathematical logic. (English summary) **2003e:03002**
Ene, Viviana ★ Lecţii de teoria mulţimilor. (Romanian summary) [Lessons of set theory]
Fitting, Melvin (*with* Mendelsohn, Richard L.) ★ First-order modal logic. **2003k:03001**
Hill, Shirley *see* **Suppes, Patrick**
(Hodges, Wilfrid) *see* **Cori, René, 2003e:03001** *and* **2003e:03002**
Jeffrey, Richard C. *see* **Boolos, George S. et al., 2003a:03001**
Kleene, Stephen Cole ★ Mathematical logic.
Krantz, Steven G. ★ Handbook of logic and proof techniques for computer science. (English summary) **2003k:03002**
(Krivine, Jean-Louis) *see* **Cori, René, 2003e:03001** *and* **2003e:03002**
Lascar, Daniel *see* **Cori, René, 2003e:03001** *and* **2003e:03002**
Levy, Azriel ★ Basic set theory. (English summary)
Mendelsohn, Richard L. *see* **Fitting, Melvin, 2003k:03001**
(Pelletier, Donald H.) *see* **Cori, René, 2003e:03001** *and* **2003e:03002**
Rautenberg, Wolfgang ★ Einführung in die mathematische Logik. (German. German summary) [Introduction to mathematical logic] **2003d:03001**
Shen′, A. Kh. (*with* Vereshchagin, Nikolai K.) ★ Basic set theory. (English summary) **2003f:03001**
Stillwell, John The continuum problem. **2003c:03001**
Suppes, Patrick (*with* Hill, Shirley) ★ First course in mathematical logic. (English summary)
Vereshchagin, Nikolai K. *see* **Shen′, A. Kh., 2003f:03001**

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Handbook:
Logic and proof techniques for computer science *see* **Krantz, Steven G., 2003k:03002**

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Ashbacher, Charles ★ Introduction to neutrosophic logic. (English summary) **2003h:03045**
Dubois, Didier (*with* Ostasiewicz, Walenty; Prade, Henri) Fuzzy sets: history and basic notions. (English summary) (*see* **2003g:03091**)
Lavendhomme, René ★ Lieux du sujet. (French. French summary) [Places of the subject] **2003a:00003**
Marker, David ★ Model theory. (English summary) **2003e:03060**
Ostasiewicz, Walenty *see* **Dubois, Didier et al., (2003g:03091)**
Parkes, Alan P. ★ Introduction to languages, machines and logic. **2003m:68001**
Parkinson, W. Jerry *see* **Ross, Timothy J., (2003i:28001)**
Prade, Henri *see* **Dubois, Didier et al., (2003g:03091)**
Ross, Timothy J. (*with* Parkinson, W. Jerry) Fuzzy set theory, fuzzy logic, and fuzzy systems. (*see* **2003i:28001**)

03–02 Research exposition (monographs, survey articles)

Blackburn, Patrick (*with* de Rijke, Maarten; Venema, Yde) ★ Modal logic. (English summary) **2003b:03001**
Bochman, Alexander ★ A logical theory of nonmonotonic inference and belief change. (English summary) **2003b:03002**
Carbone, Alessandra (*with* Semmes, Stephen) ★ A graphic apology for symmetry and implicitness. **2003a:03002**
(Gabbay, Dov M.) *see* **Viganò, Luca, 2003a:03003**
Halbach, Volker Editorial introduction. (English summary)
Hirsch, Robin (*with* Hodkinson, Ian) ★ Relation algebras by games. **2003m:03001**
(Hodges, Wilfrid) *see* **Hirsch, Robin, 2003m:03001**
Hodkinson, Ian *see* **Hirsch, Robin, 2003m:03001**
Ridder, Lothar ★ Mereologie. (German. German summary) [Mereology] **2003i:03001**
de Rijke, Maarten *see* **Blackburn, Patrick et al., 2003b:03001**
Rott, Hans ★ Change, choice and inference. **2003e:03003**
Semmes, Stephen *see* **Carbone, Alessandra, 2003a:03002**
Shin, Sun-Joo ★ The iconic logic of Peirce's graphs. (English summary) **2003f:03002**
Venema, Yde *see* **Blackburn, Patrick et al., 2003b:03001**
Viganò, Luca ★ Labelled non-classical logics. (English summary) **2003a:03003**
Zeman, Martin ★ Inner models and large cardinals. (English summary) **2003a:03004**

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Cross, Valerie V. (*with* Sudkamp, Thomas A.) ★ Similarity and compatibility in fuzzy set theory. (English summary) **2003b:03072**
(Dubois, Didier) *see* **Fundamentals of fuzzy sets, 2003g:03091**
Hájek, Petr[1] ★ Metamathematics of fuzzy logic. **2003c:03048**
van der Hoek, Wiebe (*with* Verbrugge, Rineke) Epistemic logic: a survey. **2003m:03018**
Marker, David ★ Model theory. (English summary) **2003e:03060**
(Prade, Henri) *see* **Fundamentals of fuzzy sets, 2003g:03091**
Spencer, Joel H. ★ The strange logic of random graphs. (English summary) **2003d:05196**
Sudkamp, Thomas A. *see* **Cross, Valerie V., 2003b:03072**
Verbrugge, Rineke *see* **van der Hoek, Wiebe, 2003m:03018**
Woods, John Hayden Standard logics as theories of argument and inference: deduction. (*see* **2003j:03001**)
— Standard logics as theories of argument and inference: induction. (*see* **2003j:03001**)

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Fundamentals of fuzzy sets ★ Fundamentals of fuzzy sets. **2003g:03091**

03–03 Historical (must also be assigned at least one classification number from Section 01)

Ablondi, Fred A note on Hahn's philosophy of logic. (English summary) **2003k:03003**
Alvarado, José Tomás Putnam's model-theoretic argument and the methodology for intentional notions. (Spanish. English and Spanish summaries)
Bar-Elli, Gilead Sense and objectivity in Frege's logic.
Bays, Timothy On Tarski on models. (English summary) **2003c:03002**
(Boole, George) *see* **Ferriani, Maurizio, 2003b:03004** *and* **Freguglia, Paolo, 2003d:03002**
Bos, E. P. (*with* Sundholm, B. G.) History of logic: medieval.
Brady, Geraldine ★ From Peirce to Skolem. **2003b:03003**
Burge, Tyler Frege on apriority.
Castrillo, Pilar Implication and Peirce's philosophy of logic. (Spanish. English and Spanish summaries) **2003k:03004**
Copeland, B. Jack The genesis of possible worlds semantics. (English summary) **2003e:03004**
Corry, Leo The empiricist roots of Hilbert's axiomatic approach. **2003c:03003**
Coumet, Ernest On the history of the logic diagrams "geometric figures". (Spanish)
van Dalen, Dirk The development of Brouwer's intuitionism. **2003a:03005**
Dedekind, Richard ★ ¿Qué son y para qué sirven los números? (Spanish) [The nature and purpose of numbers] **2003i:03002**
Dejnožka, Jan Russell and MacColl: reply to I. Grattan-Guinness ["Are other logics possible? MacColl's logic and some English reactions, 1905–1912", Nordic J. Philos. Logic **3** (1998), no. 1-2, 1–16 (1999); MR 2001b:03002], J. Woleński ["MacColl on modalities", ibid., 133–140; MR 2001i:03007], and S. Read ["Hugh MacColl and the algebra of strict implication", ibid., 59–83; MR 2001a:03048]. (English summary) **2003a:03006**
Durand-Richard, Marie-José The formalization of logic and the issue of meaning.
Englebretsen, George Syllogistic: old wine in new bottles. (English summary) **2003m:03002**
Epple, Moritz Did Brouwer's intuitionistic analysis satisfy its own epistemological standards? **2003f:03003**
Ettari, Dario The debate about the possible in the fourth century BC (Aristotle, Philo, Diodorus Cronus, Chrysippus) in a modern light. (Italian)
Feferman, Solomon The significance of Weyl's *Das Kontinuum*. (English summary) **2003f:03004**
(Ferreirós Domínguez, José) *see* **Dedekind, Richard, 2003i:03002**
Ferriani, Maurizio Logic and language in Boole: a historical reconstruction. (Italian. English summary) **2003b:03004**
(Frege, Gottlob Friedrich Ludwig) *see* **Gabriel, Gottfried; Burge, Tyler; Perry, John** *and* **Hill, Claire**
Freguglia, Paolo The study of algebraic logic at the turn of the twentieth century: the theory of logical equations. (Italian. English summary) **2003d:03002**
Gabriel, Gottfried Frege, Lotze, and the continental roots of early analytic philosophy.
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(Hahn, Hans) *see* **Ablondi, Fred, 2003k:03003**
(van Heijenoort, Jean) *see* **From Frege to Gödel, 2003a:03008**
(Hertz, Heinrich) *see* **Corry, Leo, 2003c:03003**
(Hilbert, David[1]) *see* **Corry, Leo, 2003c:03003** *and* **Rowe, David E., 2003c:03006**

Hill, Claire Review essay: *Frege's philosophy of mathematics* [Harvard Univ. Press, Cambridge, MA, 1995; MR 96h:03015] and *Early analytic philosophy: Frege, Russell, Wittgenstein* [Open Court, Chicago, IL, 1997].
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(Lesniewski, Stanislaw) *see* **Miéville, Denis**, **2003c:03005** *and* **Simons, Peter**, **2003e:03005**
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(MacColl, Hugh) *see* **Dejnožka, Jan**, **2003a:03006**
Miéville, Denis ★ Introduction à l'œuvre de S. Lesniewski. Fasc. I. (French) [Introduction to the works of S. Leśniewski. Vol. I] **2003c:03005**
(de Mora-Charles, Maria Sol) *see* **Coumet, Ernest**
(Neumann, Carl) *see* **Corry, Leo**, **2003c:03003**
Odifreddi, Piergiorgio Recursive functions: an archeological look. **2003j:03002**
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(Wessel, Horst) *see* **Zinov'ev, A. A.**, (**2003e:03006**)
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— *see also* **Dejnožka, Jan**, **2003a:03006**
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(Aristoxenus) *see* **Bellissima, Fabio**, **2003m:01004**
Astroh, Michael (*with* Grattan-Guinness, Ivor; Read, Stephen) A survey of the life of Hugh MacColl (1837–1909). (English summary) **2003d:01030**
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(Gandy, R. O.) *see* **Turing, A. M.**, **2003h:01029**
(Geymonat, Ludovico) *see* **De Paoli, Silvia**
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(Gödel, Kurt Friedrich) *see* **Casti, John L.**, **2003a:01020**; **Yourgrau, Palle**, **2003b:00010**; **Kurt Gödel: truth and provability**, **2003i:01037** *and* **2003i:01038**
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— *see also* **Astroh, Michael et al.**, **2003d:01030** *and* **Errata: "Algebras, projective geometry, mathematical logic, and constructing the world: intersections in the philosophy of mathematics of A. N. Whitehead"**
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03C68 Other classical first-order model theory

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03C70 Logic on admissible sets

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03C75 Other infinitary logic

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03C85 Second- and higher-order model theory

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03C90 Nonclassical models (Boolean-valued, sheaf, etc.)

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03C95 Abstract model theory

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03C98 Applications of model theory [see also 03C60]

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03Dxx Computability and recursion theory

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03D03 Thue and Post systems, etc.

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03D05 Automata and formal grammars in connection with logical questions [see also 68Q45, 68Q70, 68R15]

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03D28 Other Turing degree structures

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03D50 Recursive equivalence types of sets and structures, isols

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03D60 Computability and recursion theory on ordinals, admissible sets, etc.

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Blanck, Jens Effectivity of regular spaces. (English summary) **2003b:03058**
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03D70 Inductive definability

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03D75 Abstract and axiomatic computability and recursion theory

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Birkedal, Lars (*with* van Oosten, Jaap) Relative and modified relative realizability. (English summary) **2003h:03104**
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Tucker, J. V. (*with* Zucker, J. I.) Computable functions and semicomputable sets on many-sorted algebras. **2003g:03069**
Zucker, J. I. *see* **Tucker, J. V., 2003g:03069**

03D80 Applications of computability and recursion theory

Downey, Rodney G. (*with* LaForte, Geoffrey L.) Presentations of computably enumerable reals. (English summary) **2003j:03054**
Dunlop, Anthony J. (*with* Pour-El, Marian Boykan) The degree of unsolvability of a real number. (English summary) **2003b:03060**
Hertling, Peter (*with* Weihrauch, Klaus) Random elements in effective topological spaces with measure. (English summary) **2003j:03055**
LaForte, Geoffrey L. *see* **Downey, Rodney G., 2003j:03054**
Pour-El, Marian Boykan *see* **Dunlop, Anthony J., 2003b:03060**
Solomon, David Reed Π^0_1 classes and orderable groups. (English summary) **2003b:03061**
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Adamatskiĭ, A. I. ★ Computing in nonlinear media and automata collectives. (English summary) **2003f:68031**
Akama, Yohji Limiting partial combinatory algebras towards infinitary lambda-calculi and classical logic. (English summary) **2003d:03013**

Blanck, Jens (*with* Stoltenberg-Hansen, V.; Tucker, J. V.) Domain representations of partial functions, with applications to spatial objects and constructive volume geometry. (English summary) **2003f:68134**
Boldi, Paolo *see* **Meyssonnier, Charles et al., 2003b:03098**
Brattka, Vasco *see* **Yasugi, Mariko et al., 2003d:03103**
von Braunmühl, Burchard *see* **Rettinger, Robert et al., 2003j:03080** *and* **(2003e:68005)**
Chaitin, Gregory J. ★ Exploring randomness. (English summary) **2003i:68056**
— Paradoxes of randomness and the limitations of mathematical reasoning.
David, René On the asymptotic behaviour of primitive recursive algorithms. (English summary) **2003k:68045**
Dong, Yunmei Recursive functions of context free languages. I. The definitions of CFPRF and CFRF. (English summary) **2003f:68074**
Gengler, Romain *see* **Rettinger, Robert et al., 2003j:03080** *and* **(2003e:68005)**
Hayashi, Susumu *see* **Nakata, Masahiro, 2003f:03076**
Kamo, Hiroyasu Effective contraction theorem and its application. (English summary) **2003c:03119**
Kapoulas, George Polynomially time computable functions over p-adic fields. (English summary) **2003e:03085**
Meyssonnier, Charles (*with* Boldi, Paolo; Vigna, Sebastiano) δ-approximable functions. (English summary) **2003b:03098**
Milnikel, Robert Saxon The complexity of predicate default logic over a countable domain. (English summary) **2003m:68131**
Mori, Takakazu Computabilities of Fine-continuous functions. (English summary) **2003a:03093**
Nabutovsky, Alexander (*with* Weinberger, Shmuel) Variational problems for Riemannian functionals and arithmetic groups. **2003f:58030**
Nakata, Masahiro (*with* Hayashi, Susumu) A limiting first order realizability interpretation. (English summary) **2003f:03076**
Naughton, Thomas J. (*with* Woods, Damien) On the computational power of a continuous-space optical model of computation. (English summary) **2003b:68061**
Orlov, Yuri F. Quantum and classical Gödelian indeterminism, measurement, and informational collapse into the past. **2003b:81009**
Rettinger, Robert (*with* Zheng, Xizhong; Gengler, Romain; von Braunmühl, Burchard) Monotonically computable real numbers. (English summary) **2003j:03080**
— (*with* Zheng, Xizhong; Gengler, Romain; von Braunmühl, Burchard) Weakly computable real numbers and total computable real functions (extended abstract). (English summary) (*see* **2003e:68005**)
Schröder, Matthias Admissible representations of limit spaces. (English summary) **2003b:03100**
Simpson, Stephen G. Predicativity: the outer limits. (English summary) **2003m:03110**
— (*with* Tanaka, Kazuyuki[1]; Yamazaki, Takeshi) Some conservation results on weak König's lemma. (English summary) **2003g:03101**
Skordev, Dimitr[1]r G. Characterization of the computable real numbers by means of primitive recursive functions. (English summary) **2003b:03101**
Stoltenberg-Hansen, V. *see* **Blanck, Jens et al., 2003f:68134**
Takeuti, Izumi Effective fixed point theorem over a non-computably separable metric space. (English summary) **2003b:54047**
Tanaka, Kazuyuki[1] *see* **Simpson, Stephen G. et al., 2003g:03101**
Tucker, J. V. *see* **Blanck, Jens et al., 2003f:68134**
Vigna, Sebastiano *see* **Meyssonnier, Charles et al., 2003b:03098**
Volchan, Sérgio B. What is a random sequence? **2003i:68058**
Washihara, Masako *see* **Yasugi, Mariko et al., 2003d:03103**
Weihrauch, Klaus On computable metric spaces Tietze-Urysohn extension is computable. (English summary) **2003b:03102**
— (*with* Zhong, Ning[1]) Is wave propagation computable or can wave computers beat the Turing machine? **2003i:03064**
Weinberger, Shmuel *see* **Nabutovsky, Alexander, 2003f:58030**
Woods, Damien *see* **Naughton, Thomas J., 2003b:68061**
Yamazaki, Takeshi *see* **Simpson, Stephen G. et al., 2003g:03101**
Yasugi, Mariko (*with* Brattka, Vasco; Washihara, Masako) Limit computation of some discontinuous functions.
— (*with* Brattka, Vasco; Washihara, Masako) Computability aspects of some discontinuous functions. (English summary) **2003d:03103**
Yoshikawa, Atsushi Interpolation functor and computability. (English summary) **2003g:03106**
Zheng, Xizhong *see* **Rettinger, Robert et al., 2003j:03080** *and* **(2003e:68005)**
Zhong, Ning[1] *see* **Weihrauch, Klaus, 2003i:03064**

03D99 None of the above, but in this section

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Menni, Matias More exact completions that are toposes. (English summary) **2003d:18004**
Ratschan, Stefan Approximate quantified constraint solving by cylindrical box decomposition. (English summary) **2003a:68152**
Zheng, Xizhong The closure properties on real numbers under limits and computable operators. (English summary) **2003j:03082**

03Exx Set theory

Items with secondary classifications in 03Exx

Béziau, Jean Yves La théorie des ensembles et la théorie des catégories: présentation de deux sœurs ennemies du point de vue de leurs relations avec les fondements des mathématiques. [Set theory and category theory: two rival siblings and their relations with the foundations of mathematics]
(Erdős, Paul[1]) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Halász, Gábor) *see* **Paul Erdős and his mathematics, 2003h:00021**
Levy, Azriel ★ Basic set theory. (English summary)
(Lovász, László) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Simonovits, Miklós) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Sós, Vera T.) *see* **Paul Erdős and his mathematics, 2003h:00021**
Tiles, Mary Logical foundations of set theory and mathematics.
(Zhang, Yi[12]) *see* **Logic and algebra, 2003c:03007**

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Budapest ★ Paul Erdős and his mathematics. II. **2003h:00021**
Contemporary Mathematics ★ Logic and algebra. **2003c:03007**
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Erdős, Paul[1] ★ Paul Erdős and his mathematics. II. **2003h:00021**
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03E02 Partition relations

Baumgartner, James E. Hajnal's contributions to combinatorial set theory and the partition calculus. **2003d:03071**
Darby, Carl (*with* Larson, Jean A.) Multicolored graphs on countable ordinals of finite exponent. (English summary) **2003e:03088**
Farmaki, Vassiliki Systems of Ramsey families. (English summary) **2003m:03071**
Foreman, Matthew Stationary sets, Chang's conjecture and partition theory. **2003e:03089**
Halbeisen, Lorenz Ramseyan ultrafilters. (English summary) **2003a:03066**
Hyttinen, Tapani A remark on weakly compact cardinals. (English summary) **2003c:03080**
Larson, Jean A. *see* **Darby, Carl, 2003e:03088**
Matet, Pierre (*with* Péan, Cédric; Todorčević, Stevo) Prime ideals on $P_\omega(\lambda)$ with the partition property. (English summary) **2003j:03056**
— The covering number for category and partition relations on $P_\omega(\lambda)$. (English summary) **2003d:03072**
Péan, Cédric *see* **Matet, Pierre et al., 2003j:03056**
Sauer, Norbert W. Coloring finite substructures of countable structures. (English summary) **2003k:03060**
Shelah, Saharon A partition relation using strongly compact cardinals. (English summary) **2003m:03072**
Todorčević, Stevo *see* **Matet, Pierre et al., 2003j:03056**

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Asperó, David (*with* Welch, Philip David) Bounded Martin's maximum, weak Erdős cardinals, and ψ_{AC}. (English summary) **2003e:03102**
Gasparis, Ioannis A continuum of totally incomparable hereditarily indecomposable Banach spaces. (English summary) **2003f:46014**
— Strictly singular non-compact operators on hereditarily indecomposable Banach spaces. (English summary) **2003j:46009**
Jockusch, Carl G., Jr. (*with* Lakins, Tamara J.) Generalized r-cohesiveness and the arithmetical hierarchy. A correction to: "Generalized cohesiveness" [J. Symbolic Logic **64** (1999), no. 2, 489–516; MR 2002d:03074]. (English summary) **2003h:03067**
Lakins, Tamara J. *see* **Jockusch, Carl G., Jr., 2003h:03067**
Larson, Jean A. Erdős and ordinals. (English summary) **2003k:03061**
Welch, Philip David *see* **Asperó, David, 2003e:03102**

03E04 Ordered sets and their cofinalities; pcf theory

Gitik, Moti (*with* Shelah, Saharon) On some configurations related to the Shelah weak hypothesis. (English summary) **2003d:03073**
Shelah, Saharon Strong covering without squares. (English summary) **2003a:03067**
— More constructions for Boolean algebras. (English summary) **2003f:03063**
— *see also* **Gitik, Moti, 2003d:03073**

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Di Nasso, Mauro (*with* Forti, Marco) On the ordering of the nonstandard real line. (English summary) **2003h:03107**
Forti, Marco *see* **Di Nasso, Mauro, 2003h:03107**
Goldstern, Martin R. (*with* Shelah, Saharon) Clones on regular cardinals. (English summary) **2003c:08006**
— (*with* Shelah, Saharon) Antichains in products of linear orders. (English summary) **2003j:06001**
Shelah, Saharon *see* **Goldstern, Martin R., 2003c:08006** *and* **2003j:06001**

03E05 Other combinatorial set theory

Abért, Miklós (*with* Keleti, Tamás) Shuffle the plane. (English summary) **2003g:03070**
Cichoń, Jacek On dense subsets of rational numbers. (English summary) **2003c:03081**
Cummings, James (*with* Foreman, Matthew; Magidor, Menachem) Squares, scales and stationary reflection. (English summary) **2003a:03068**
Eisworth, Todd Forcing and stable ordered-union ultrafilters. (English summary) **2003d:03074**
Farah, Ilijas Dimension phenomena associated with $\beta\mathbb{N}$-spaces. **2003h:03072**
Foreman, Matthew *see* **Cummings, James et al., 2003a:03068**
Grinblat, L. Š. ★ Algebras of sets and combinatorics. (English summary) **2003m:03073**
Ishiu, Tetsuya (*with* Yoshinobu, Yasuo) Directive trees and games on posets. (English summary) **2003a:03069**
Just, Winfried ♣-like principles under CH. (English summary) **2003b:03062**
Keleti, Tamás *see* **Abért, Miklós, 2003g:03070**
Komjáth, Péter Subgraph chromatic number. (English summary) **2003e:03090**
— Five degrees of separation. (English summary) **2003c:03082**
Kraszewski, Jan Properties of ideals on the generalized Cantor spaces. (English summary) **2003a:03070**
Laflamme, Claude (*with* Leary, Christopher C.) Filter games on ω and the dual ideal. (English summary) **2003f:03064**
Leary, Christopher C. *see* **Laflamme, Claude, 2003f:03064**
Magidor, Menachem *see* **Cummings, James et al., 2003a:03068**

Nowik, Andrzej Possibly there is no uniformly completely Ramsey null set of size 2^ω. (English summary) **2003j:03057**
Scheepers, Marion (*with* Tsaban, Boaz) The combinatorics of Borel covers. (English summary) **2003e:03091**
Shelah, Saharon (*with* Väisänen, Pauli) Almost free groups and Ehrenfeucht-Fraïssé games for successors of singular cardinals. (English summary) **2003h:03073**
— On the existence of large subsets of $[\lambda]^{<\kappa}$ which contain no unbounded non-stationary subsets. (English summary) **2003d:03075**
— Weak diamond. (English summary) **2003c:03083**
— *see also* **Grinblat, L. Š.**, **2003m:03073**
Shioya, Masahiro Generating the club filter on $\mathcal{P}_\kappa\lambda$. (English summary) **2003f:03065**
(Stoyanovskiĭ, A.) *see* **Grinblat, L. Š.**, **2003m:03073**
Tsaban, Boaz *see* **Scheepers, Marion**, **2003e:03091**
Väisänen, Pauli *see* **Shelah, Saharon**, **2003h:03073**
Yoshinobu, Yasuo *see* **Ishiu, Tetsuya**, **2003a:03069**

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Apter, Arthur W. (*with* Cummings, James) Blowing up the power set of the least measurable. (English summary) **2003m:03077**
Blass, Andreas Nearly adequate sets. (English summary) **2003h:03075**
Bukovská, Zuzana (*with* Bukovský, Lev) Comparing families of thin sets. (English summary) **2003g:42003**
Bukovský, Lev *see* **Bukovská, Zuzana**, **2003g:42003**
Cummings, James *see* **Apter, Arthur W.**, **2003m:03077**
Dobrinen, Natasha Games and general distributive laws in Boolean algebras. (English summary) **2003g:03107**
Eklof, Paul C. (*with* Mekler, Alan H.) ★ Almost free modules. **2003e:20002**
Goldstern, Martin R. (*with* Shelah, Saharon) Clones on regular cardinals. (English summary) **2003c:08006**
Halko, Aapo (*with* Shelah, Saharon) On strong measure zero subsets of $^\kappa 2$. (English summary) **2003a:03072**
Hechler, Stephen H. On consistent subsets of large sets of satisfiable sentences. (English summary) **2003a:03017**
Jipsen, Peter (*with* Pinus, A. G.; Rose, Henry) Rudin-Keisler posets of complete Boolean algebras. (English summary) **2003b:06014**
Koszmider, Piotr B. Universal matrices and strongly unbounded functions. (English summary) **2003g:03078**
Krawczyk, Adam (*with* Michalewski, Henryk) An example of a topological group. (English summary) **2003j:54034**
Mekler, Alan H. *see* **Eklof, Paul C.**, **2003e:20002**
Michalewski, Henryk *see* **Krawczyk, Adam**, **2003j:54034**
Mlček, Josef (*with* Zlatoš, Pavol) Some Ramsey-type theorems for countably determined sets. (English summary) **2003h:03108**
Pinus, A. G. *see* **Jipsen, Peter et al.**, **2003b:06014**
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Schlindwein, Chaz Shelah's work on non-semi-proper iterations. II. **2003g:03079**
Seisenberger, Monika Kruskal's tree theorem in a constructive theory of inductive definitions. (English summary) **2003c:03123**
Shelah, Saharon Strong covering without squares. (English summary) **2003a:03067**
— *see also* **Halko, Aapo**, **2003a:03072** *and* **Goldstern, Martin R.**, **2003c:08006**
Zhang, Yi[12] Remarks on a class of almost disjoint families. (English summary) **2003g:03080**
Zlatoš, Pavol *see* **Mlček, Josef**, **2003h:03108**

03E10 Ordinal and cardinal numbers

Bès, Alexis Decidability and definability results related to the elementary theory of ordinal multiplication. (English summary) **2003b:03063**
Deiser, Oliver Kennen Sie ω_1? [Are you acquainted with ω_1?] **2003a:03071**
Dixon, Paul W. To parse the infinite quantity, a critical review, an exposition on the foundations of mathematics. (English summary)
Hjorth, Greg Knight's model, its automorphism group, and characterizing the uncountable cardinals. (English summary) **2003c:03084**
Larson, Jean A. Erdős and ordinals. (English summary) **2003k:03061**
Steinhart, Eric Why numbers are sets. (English summary) **2003i:03051**
Weiermann, Andreas Zero-one law characterizations of ε_0. (English summary) **2003j:03058**

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Farmaki, Vassiliki Ordinal indices and Ramsey dichotomies measuring c_0-content and semibounded completeness. (English summary) **2003b:46010**
Kalantan, Lutfi (*with* Szeptycki, Paul J.) κ-normality and products of ordinals. (English summary) **2003g:54051**
Shelah, Saharon More Jonsson algebras. (English summary) **2003m:03086**
Shen′, A. Kh. (*with* Vereshchagin, Nikolai K.) ★ Basic set theory. (English summary) **2003f:03001**
Szeptycki, Paul J. *see* **Kalantan, Lutfi**, **2003g:54051**
Vaughan, Jerry E. Universal ultrametric spaces of smallest weight. (English summary) **2003a:54031**
Vereshchagin, Nikolai K. *see* **Shen′, A. Kh.**, **2003f:03001**

03E15 Descriptive set theory [see also 28A05, 54H05]

Adams, Scot Containment does not imply Borel reducibility. (English summary) **2003j:03059**
Bartoszyński, Tomek (*with* Shelah, Saharon) Perfectly meager sets and universally null sets. (English summary) **2003h:03074**
Camerlo, Riccardo The relation of recursive isomorphism for countable structures. (English summary) **2003b:03064**
Cichoń, Jacek (*with* Żeberski, Szymon) On the splitting number and Mazurkiewicz's theorem. (English summary) **2003b:03065**
Farah, Ilijas Analytic Hausdorff gaps. **2003e:03092**
Halko, Aapo (*with* Shelah, Saharon) On strong measure zero subsets of $^\kappa 2$. (English summary) **2003a:03072**
Hjorth, Greg Cardinalities in the projective hierarchy. **2003m:03074**
Jackson, Stephen Craig (*with* Kechris, Alexander S.; Louveau, A.) Countable Borel equivalence relations. (English summary) **2003f:03066**
Kanovei, Vladimir (*with* Reeken, Michael) New Radon-Nikodym ideals. (English summary) **2003g:03071**
Kechris, Alexander S. *see* **Jackson, Stephen Craig et al.**, **2003f:03066**
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Löwe, Benedikt Kleinberg sequences and partition cardinals below δ^1_5. (English summary) **2003c:03085**
Mauldin, R. Daniel Some problems in set theory, analysis and geometry. (English summary) **2003j:03060**
Nowik, Andrzej On some properties of the class of real functions with λ and λ' graphs. (English summary) **2003m:03075**
— On Borel version of uniformly completely Ramsey sets. (English summary) **2003c:03086**
— (*with* Weiss, Tomasz) On the Ramseyan properties of some special subsets of 2^ω and their algebraic sums. (English summary) **2003c:03087**
Reeken, Michael *see* **Kanovei, Vladimir**, **2003g:03071**
Shelah, Saharon *see* **Halko, Aapo**, **2003a:03072** *and* **Bartoszyński, Tomek**, **2003h:03074**
Sofronidis, Nikolaos Efstathiou Natural examples of $\mathbf{\Pi}^0_5$-complete sets in analysis. (English summary) **2003a:03073**
Thomas, Simon R. Some applications of superrigidity to Borel equivalence relations. (English summary) **2003j:03061**
Weiss, Tomasz *see* **Nowik, Andrzej**, **2003c:03087**
Żeberski, Szymon Nonstandard proofs of Eggleston like theorems. (English summary) **2003d:03076**
— *see also* **Cichoń, Jacek**, **2003b:03065**

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Bagaria, Joan (*with* López-Abad, Jordi) Weakly Ramsey sets in Banach spaces. **2003d:46013**
Bartoszyński, Tomek (*with* Shelah, Saharon) Strongly meager and strong measure zero sets. (English summary) **2003b:03068**
— Remarks on small sets of reals. (English summary) **2003i:03052**
Bossard, Benoît A coding of separable Banach spaces. Analytic and coanalytic families of Banach spaces. (English summary) **2003d:46016**
Casevitz, Pierre The complexity of subdifferentiation and its inverse on convex functions in Banach spaces. (English summary) **2003k:46024**
Duparc, J. A hierarchy of deterministic context-free ω-languages. (English summary) **2003h:68065**
Dutrieux, Yves Lipschitz-quotients and the Kunen-Martin theorem. (English summary) **2003e:46020**
Finkel, Olivier Topological properties of omega context-free languages. (English summary) **2003c:68124**
— Wadge hierarchy of omega context-free languages. (English summary) **2003e:03078**
— Borel hierarchy and omega context free languages. (English summary) **2003i:03043**
Hjorth, Greg Knight's model, its automorphism group, and characterizing the uncountable cardinals. (English summary) **2003c:03084**
Krupski, Paweł More non-analytic classes of continua. (English summary) **2003i:54043**
Laczkovich, Miklós Paradoxes in measure theory. **2003j:28044**
Laflamme, Claude (*with* Leary, Christopher C.) Filter games on ω and the dual ideal. (English summary) **2003f:03064**
Leary, Christopher C. *see* **Laflamme, Claude**, **2003f:03064**
López-Abad, Jordi *see* **Bagaria, Joan**, **2003d:46013**
Löwe, Benedikt Turing cones and set theory of the reals. (English summary) **2003c:03097**
Mildenberger, Heike No Borel connections for the unsplitting relations. (English summary) **2003i:03053**
Natkaniec, T. (*with* Wesołowska, J.) On the convergence of ω_1 sequences of real functions. (English summary) **2003d:26002**
Neeman, Itay Optimal proofs of determinacy. II. (English summary) **2003k:03065**
Nowik, Andrzej Possibly there is no uniformly completely Ramsey null set of size 2^ω. (English summary) **2003j:03057**
Raja, M. On some class of Borel measurable maps and absolute Borel topological spaces. (English summary) **2003e:54038**
Scheepers, Marion (*with* Tsaban, Boaz) The combinatorics of Borel covers. (English summary) **2003e:03091**
Schindler, Ralf-Dieter The core model for almost linear iterations. (English summary) **2003d:03086**
Shelah, Saharon A countable structure does not have a free uncountable automorphism group. (English summary) **2003j:20005**
— *see also* **Bartoszyński, Tomek**, **2003b:03068**
Tsaban, Boaz *see* **Scheepers, Marion**, **2003e:03091**
Velickovic, Boban The basis problem for CCC posets. (English summary) **2003e:03098**
Wesołowska, J. *see* **Natkaniec, T.**, **2003d:26002**
Zapletal, Jindřich Forcing with ideals generated by closed sets. (English summary) **2003c:03092**

03E17 Cardinal characteristics of the continuum

Bartoszyński, Tomek Remarks on small sets of reals. (English summary) **2003i:03052**
Blass, Andreas Nearly adequate sets. (English summary) **2003h:03075**
Brendle, Jörg Mad families and iteration theory. (English summary) **2003j:03062**
— Evasion and prediction. III. Constant prediction and dominating reals. (English summary) **2003j:03063**
Geschke, Stefan (*with* Kojman, Menachem) Convexity numbers of closed sets in $\mathbb{R}^n$. (English summary) **2003e:03093**
Gruenhage, Gary (*with* Levy, Ronnie) Covering $^\omega\omega$ by special Cantor sets. (English summary) **2003j:03064**

Kojman, Menachem *see* **Geschke, Stefan**, **2003e:03093**
Levy, Ronnie *see* **Gruenhage, Gary**, **2003j:03064**
Mildenberger, Heike Groupwise dense families. (English summary) **2003d:03077**
— (*with* Shelah, Saharon) The relative consistency of $\mathfrak{g} < \mathrm{cf}(\mathrm{Sym}(\omega))$. (English summary) **2003c:03088**
— No Borel connections for the unsplitting relations. (English summary) **2003i:03053**
Shelah, Saharon *see* **Mildenberger, Heike**, **2003c:03088**
Steprāns, Juris The almost disjointness cardinal invariant in the quotient algebra of the rationals modulo the nowhere dense subsets. (English summary) **2003g:03072**
Szeptycki, Paul J. Soft almost disjoint families. (English summary) **2003d:03078**

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Bella, Angelo (*with* Dow, Alan; Hart, Klaas Pieter; Hrušák, Michael; van Mill, Jan; Ursino, Pietro) Embeddings into $\mathcal{P}(\mathbb{N})/\mathrm{fin}$ and extension of automorphisms. (English summary) **2003g:06018**
Burdick, Bruce S. Some equivalences for Martin's axiom in asymmetric topology. (English summary) **2003e:03103**
Cichoń, Jacek On dense subsets of rational numbers. (English summary) **2003c:03081**
— (*with* Żeberski, Szymon) On the splitting number and Mazurkiewicz's theorem. (English summary) **2003b:03065**
Ciesielski, Krzysztof[2] (*with* Pawlikowski, Janusz) On the cofinalities of Boolean algebras and the ideal of null sets. (English summary) **2003d:06018**
Dow, Alan *see* **Bella, Angelo et al.**, **2003g:06018**
Eisworth, Todd Forcing and stable ordered-union ultrafilters. (English summary) **2003d:03074**
Göbel, Rüdiger (*with* Rodriguez, José Luis; Shelah, Saharon) Large localizations of finite simple groups. (English summary) **2003j:20022**
Hart, Klaas Pieter *see* **Bella, Angelo et al.**, **2003g:06018**
Hrušák, Michael Life in the Sacks model. (English summary) **2003b:03069**
— *see also* **Bella, Angelo et al.**, **2003g:06018**
Larson, Paul A uniqueness theorem for iterations. (English summary) **2003m:03081**
Matet, Pierre The covering number for category and partition relations on $P_\omega(\lambda)$. (English summary) **2003d:03072**
van Mill, Jan *see* **Bella, Angelo et al.**, **2003g:06018**
Pawlikowski, Janusz *see* **Ciesielski, Krzysztof[2]**, **2003d:06018**
Rodríguez, José Luis *see* **Göbel, Rüdiger et al.**, **2003j:20022**
Shelah, Saharon *see* **Göbel, Rüdiger et al.**, **2003j:20022**
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03E25 Axiom of choice and related propositions

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03E40 Other aspects of forcing and Boolean-valued models

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03E45 Inner models, including constructibility, ordinal definability, and core models

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03E50 Continuum hypothesis and Martin's axiom

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03E55 Large cardinals

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03E60 Determinacy principles

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03E70 Nonclassical and second-order set theories

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03E72 Fuzzy set theory

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03F25 Relative consistency and interpretations

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03F30 First-order arithmetic and fragments

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03F40 Gödel numberings in proof theory

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03F45 Provability logics and related algebras (e.g., diagonalizable algebras) [see also 03B45, 03G25, 06E25]

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03F50 Metamathematics of constructive systems

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03F52 Linear logic and other substructural logics [see also 03B47]

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03F55 Intuitionistic mathematics

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03F60 Constructive and recursive analysis [see also 03B30, 03D45, 26E40, 46S30, 47S30]

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Lombardi, Henri *see* **Coste, Michel et al., 2003d:03104**
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03Gxx Algebraic logic

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03G05 Boolean algebras [see also 06Exx]

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03G10 Lattices and related structures [see also 06Bxx]

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Jun, Young Bae *see* **Roh, Eun Hwan et al.**, **2003a:03094**
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Leitgeb, Hannes Truth and the liar in De Morgan-valued models. (English summary) **2003h:03102**
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Wang, Wei (*with* Xu, Yang[1]; Song, Zhen-ming) The logical properties of filters of lattice implication algebra. (English and Chinese summaries) **2003a:03095**
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03G12 Quantum logic [see also 06C15, 81P10]

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Megill, Norman D. (*with* Pavičić, Mladen) Deduction, ordering, and operations in quantum logic. (English summary) **2003c:81016**
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03G15 Cylindric and polyadic algebras; relation algebras

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Radwan, Abdelaziz E. (*with* Hussein, Salah El Din S.) On fuzzy presheaves. (English summary) **2003d:54015**
Rasga, João (*with* Sernadas, Amilcar; Sernadas, Cristina; Viganò, Luca) Fibring labelled deduction systems. (English summary) **2003e:03018**
Robinson, Edmund (*with* Rosolini, Giuseppe) An abstract look at the realizability. (English summary) **2003e:18009**
Rosolini, Giuseppe *see* **Robinson, Edmund**, 2003e:18009
Sernadas, Amilcar *see* **Rasga, João et al.**, 2003e:03018
Sernadas, Cristina *see* **Rasga, João et al.**, 2003e:03018
Simmons, Harold *see* **Mitchell, W. P. R.**, 2003c:03116
Streicher, Thomas *see* **Lietz, Peter**, 2003e:03013
Taylor, Paul Subspaces in abstract Stone duality. (English summary) **2003g:54021**
Viganò, Luca *see* **Rasga, João et al.**, 2003e:03018

03G99 None of the above, but in this section

Voutsadakis, George Categorical abstract algebraic logic: algebraizable institutions. (English summary) **2003h:03106**

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Celani, Sergio Generalized join-hemimorphisms on Boolean algebras. (English summary) **2003m:06010**
Wolski, Marcin Notes on the geometry of logic and philosophy. (English summary)

03Hxx Nonstandard models [see also 03C62]

03H05 Nonstandard models in mathematics [see also 26E35, 28E05, 30G06, 46S20, 47S20, 54J05]

Dalgin, Hasan (*with* Haddad, Labib; Terziler, Mehmet) On the additive group structure of the nonstandard models of the theory of integers. (English summary) **2003d:03107**
Di Nasso, Mauro Nonstandard analysis by means of ideal values of sequences. (English summary) **2003b:03110**
— (*with* Zhang, Yi[12]) Nonstandard analysis and an application to the symmetric group on natural numbers. (English summary) **2003g:03111**
— (*with* Forti, Marco) On the ordering of the nonstandard real line. (English summary) **2003h:03107**
— (*with* Hrbacek, Karel) Combinatorial principles in nonstandard analysis. (English summary) **2003m:03117**
Escultura, Edgar E. The flux theory of gravitation. XVII. The new mathematics and physics. (English summary)
Forti, Marco *see* **Di Nasso, Mauro**, 2003h:03107
Giordano, Paolo Nilpotent infinitesimals and synthetic differential geometry in classical logic. (English summary) **2003e:03125**
Gordon, Evgenii I. (*with* Rezvova, Olga A.) On hyperfinite approximations of the field **R**. (English summary) **2003c:03128**
Haddad, Labib *see* **Dalgin, Hasan et al.**, 2003d:03107
Hrbacek, Karel *see* **Di Nasso, Mauro**, 2003m:03117
Jin, Renling (*with* Keisler, H. Jerome) Abelian groups with layered tiles and the sumset phenomenon. (English summary) **2003g:03112**
Keisler, H. Jerome *see* **Jin, Renling**, 2003g:03112
Kusraev, A. G. (*with* Kutateladze, S. S.) Nonstandard methods and Kantorovich spaces. (*see* **2003f:46001**)
Kutateladze, S. S. *see* **Kusraev, A. G.**, (2003f:46001)
Mlček, Josef (*with* Zlatoš, Pavol) Some Ramsey-type theorems for countably determined sets. (English summary) **2003h:03108**
Rezvova, Olga A. *see* **Gordon, Evgenii I.**, 2003c:03128
Szalay, I. Exploded and compressed numbers. (English summary) **2003m:03118**
Terziler, Mehmet *see* **Dalgin, Hasan et al.**, 2003d:03107
Vanderputten, Laurent Nonstantard representation theory of standard operators defined on the space of Bochner integrable functions. (English summary) **2003b:03111**
Zhang, Yi[12] *see* **Di Nasso, Mauro**, 2003g:03111
Zlatoš, Pavol *see* **Mlček, Josef**, 2003h:03108

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Al'beverio, S. (*with* Wu, Jiang-Lun) Nonstandard construction of stable type Euclidean random field measures. (English summary) **2003b:28011**
Baratella, Stefano (*with* Ng, Siu-Ah) Consequences of neocompact quantifier elimination. (English summary) **2003m:03054**
Benham, Richard D. A nonstandard compactness criterion. (English summary) **2003g:03011**
Benth, Fred Espen (*with* Ng, Siu-Ah) Donsker's delta function and the covariance between generalized functionals. (English summary) **2003f:60120**
(Cauchy, Augustin-Louis) *see* **Spalt, Detlef D.**, 2003e:01024
Chen, Dong Li Non-standard representations of Radon spaces. (Chinese. English and Chinese summaries) **2003e:28038**
— The Loeb spaces of σ-finite measure spaces. (Chinese. English and Chinese summaries) **2003j:28036**
Elsken, Thomas A nonstandard description of retarded functional differential equations. (English summary) **2003g:34135**
Emel'yanov, Eduard Yu. Infinitesimals in vector lattices. (English summary) (*see* **2003f:46001**)
Escultura, Edgar E. The flux theory of gravitation. V. The mathematics of the new physics. (English summary)
Fajardo, Sergio (*with* Keisler, H. Jerome) ★ Model theory of stochastic processes. **2003k:60004**
Fleuriot, Jacques D. Nonstandard geometric proofs. (English summary) (*see* **2003a:68007**)
Gutman, A. E. (*with* Ryabko, D. B.) A completeness criterion for the nonstandard hull of a normed space in a Boolean-valued universe. (Russian)
Hoskins, Roy Frank *see* **Sousa Pinto, J.**, 2003f:46058
Jumarie, Guy Fractional master equation: non-standard analysis and Liouville-Riemann derivative. (English summary) **2003i:82069**
Karabyn, O. On notion of bases in a Hilbert space. (English and Russian summaries) **2003j:46117**
Keisler, H. Jerome *see* **Fajardo, Sergio**, 2003k:60004
Kudrik, T. S. *see* **Lyantse, V. È.**, 2003j:46118
(Kutateladze, S. S.) *see* **Nonstandard analysis and vector lattices**, 2003f:46001
Lakrib, Mustapha On the averaging method for differential equations with delay. (English summary) **2003f:34136**
Loeb, Peter Albert Nonstandard analysis and measure theory. **2003j:28038**
Lyantse, V. È. (*with* Kudrik, T. S.) On near-standardness in Hilbert spaces. (Russian. Russian summary) **2003j:46118**
Mora E., Carlos F. Solving stochastic differential equations using nonstandard analysis. (Spanish. Spanish summary) **2003e:60126**
Ng, Siu-Ah (*with* Render, Hermann) The Puritz order and its relationship to the Rudin-Keisler order. (English summary) **2003d:54045**
— *see also* **Benth, Fred Espen**, 2003f:60120 *and* **Baratella, Stefano**, 2003m:03054
Ospina, Dwight Integration for martingales using nonstandard analysis. (Spanish. English and Spanish summaries) **2003a:28026**
Palmgren, Erik Unifying constructive and nonstandard analysis. (English summary) **2003b:03088**
Pétry, André À propos des tangentes à une courbe, une présentation non standard. (French summary) [A presentation using nonstandard analysis of tangents to a curve] **2003c:26038**
Prokhorova, Marina F. On the existence of factor sets by external equivalence relations in IST. (Russian. Russian summary) **2003h:03087**
Render, Hermann *see* **Ng, Siu-Ah**, 2003d:54045
Rosemeier, Frank On Conway numbers and generalized real numbers: Conway's theory of games and numbers constructively reconstructed. (English summary) **2003c:03122**
Ross, David A. The constructive content of nonstandard measure existence proofs—is there any? (English summary) **2003e:28041**
Ryabko, D. B. *see* **Gutman, A. E.**
Salanskis, Jean-Michel ★ Le constructivisme non standard. (French. French summary) [Nonstandard constructivism] **2003f:03011**
(Schmieden, Curt) *see* **Spalt, Detlef D.**, 2003c:01038
Smarandache, Florentin Neutrosophy, a new branch of philosophy. (English summary)
Sousa Pinto, J. (*with* Hoskins, Roy Frank) Hyperfinite representation of distributions. (English summary) **2003f:46058**
Spalt, Detlef D. Curt Schmieden's non-standard analysis—a method of dissolving the standard paradoxes of analysis. **2003c:01038**
— Cauchys Kontinuum. Eine historiografische Annäherung via Cauchys Summensatz. [Cauchy's continuum. A historiographic approach via the Cauchy sum theorem] **2003e:01024**
Wu, Jiang-Lun *see* **Al'beverio, S.**, 2003b:28011

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Nonstandard analysis and vector lattices ★ Nonstandard analysis and vector lattices. **2003f:46001**

03H10 Other applications of nonstandard models (economics, physics, etc.)

Items with secondary classifications in 03H10

Yamashita, Hideyasu Nonstandard methods in quantum field theory. I. A hyperfinite formalism of scalar fields. (English summary) **2003b:81113**

03H15 Nonstandard models of arithmetic [see also 11U10, 12L15, 13L05]

Bigorajska, Teresa Strongly maximal subgroups determined by elements in interstices. (English summary) **2003m:03119**
Luo, Li Bo *see* **Yu, Li Rong**, 2003g:03113
Putnam, Hilary Nonstandard models and Kripke's proof of the Gödel theorem. (English summary) **2003h:03109**
Yu, Li Rong (*with* Luo, Li Bo) The generalization of the Chinese remainder theorem. (English summary) **2003g:03113**

Items with secondary classifications in 03H15

Adamowicz, Zofia Herbrand consistency and bounded arithmetic. (English summary) **2003d:03097**
— (*with* Zbierski, Paweł) On complexity reduction of Σ_1 formulas. (English summary) **2003k:03075**
Dalgin, Hasan (*with* Haddad, Labib; Terziler, Mehmet) On the additive group structure of the nonstandard models of the theory of integers. (English summary) **2003d:03107**
Haddad, Labib *see* **Dalgin, Hasan et al.**, 2003d:03107
McAllister, Alex M. Bounded Scott set saturation. (English summary) **2003a:03054**
Terziler, Mehmet *see* **Dalgin, Hasan et al.**, 2003d:03107
Zbierski, Paweł *see* **Adamowicz, Zofia**, 2003k:03075

05–XX Combinatorics {For finite fields, see 11Txx.}

05–01 Instructional exposition (textbooks, tutorial papers, etc.)

Anderson, Ian ★ Combinatorics of finite sets. (English summary) **2003b:05001**
Bóna, Miklós ★ A walk through combinatorics. (English summary)
Charalambides, Charalambos A. ★ Enumerative combinatorics. (English summary) **2003k:05001**
Jukna, Stasys ★ Extremal combinatorics. (English summary) **2003g:05001**
Riordan, John ★ An introduction to combinatorial analysis.
(Stanley, Richard P.) *see* **Bóna, Miklós**
Valiente Feruglio, Gabriel ★ Algorithms on trees and graphs. (English summary) **2003i:05001**

Items with secondary classifications in 05–01

(Agarwal, Ashok Kumar[1]) *see* **Number theory and discrete mathematics, 2003i:00009**
Andreescu, Titu (*with* Feng, Zuming) ★ 102 combinatorial problems. (English summary) **2003g:00005**
(Berndt, Bruce C.) *see* **Number theory and discrete mathematics, 2003i:00009**
(Everett, William B.) *see* **Shafarevich, Igor R., 2003g:00002**
Feng, Zuming *see* **Andreescu, Titu, 2003g:00005**
Frécon, Louis ★ Éléments de mathématiques discrètes. (French. French summary) [Elements of discrete mathematics] **2003f:00001**
Garnier, Rowan (*with* Taylor, John[1]) ★ Discrete mathematics for new technology. (English summary) **2003e:00001**
Ihringer, Thomas ★ Diskrete Mathematik. (German) [Discrete mathematics] **2003j:00001**
Kappraff, Jay ★ Connections. (English summary) **2003e:00020**
Korte, Bernhard (*with* Vygen, Jens) ★ Combinatorial optimization. (English summary) **2003b:90004**
(Krattenthaler, Christian F.) *see* **Number theory and discrete mathematics, 2003i:00009**
(Mullen, Gary L.) *see* **Number theory and discrete mathematics, 2003i:00009**
(Ramachandra, Kanakanahalli) *see* **Number theory and discrete mathematics, 2003i:00009**
Shafarevich, Igor R. ★ Discourses on algebra. (English summary) **2003g:00002**
Taylor, John[1] *see* **Garnier, Rowan, 2003e:00001**
Vygen, Jens *see* **Korte, Bernhard, 2003b:90004**
(Waldschmidt, Michel) *see* **Number theory and discrete mathematics, 2003i:00009**
Wallis, W. D. ★ Magic graphs. (English summary) **2003h:05165**
— ★ A beginner's guide to discrete mathematics. (English summary) **2003j:00002**
Wilson, Robert A. ★ Graphs, colourings and the four-colour theorem. (English summary) **2003c:05095**

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Chandigarh ★ Number theory and discrete mathematics. **2003i:00009**
Number theory and discrete mathematics ★ Number theory and discrete mathematics. **2003i:00009**
Problems:
USA International Mathematical Olympiad *see* **Andreescu, Titu, 2003g:00005**

05–02 Research exposition (monographs, survey articles)

Adhikari, Sukumar Das ★ Aspects of combinatorics and combinatorial number theory. (English summary) **2003d:05001**
Fleiner, Tamás ★ Stable and crossing structures. (Dutch summary) **2003a:05001**
Kuz'min, O. V. ★ Обобщенные пирамиды Паскаля и их приложения. (Russian. English and Russian summaries) [Generalized Pascal pyramids and their applications] **2003d:05002**
Molloy, Michael S. O. (*with* Reed, Bruce A.) ★ Graph colouring and the probabilistic method. (English summary) **2003c:05001**
Reed, Bruce A. *see* **Molloy, Michael S. O., 2003c:05001**

Items with secondary classifications in 05–02

Ahlswede, Rudolf Advances on extremal problems in number theory and combinatorics. **2003f:11002**
(Dilcher, Karl) *see* **Herman, Jiřiet al., 2003j:00006**
Herman, Jiří (*with* Kučera, Radan; Šimša, Jaromír) ★ Counting and configurations. **2003j:00006**
Kučera, Radan *see* **Herman, Jiřiet al., 2003j:00006**
Liu, Yan Pei ★ Enumerative theory of maps. (English summary) **2003c:05114**
Schröder, Bernd S. W. ★ Ordered sets. (English summary) **2003k:06001**
Šimša, Jaromír *see* **Herman, Jiřiet al., 2003j:00006**
Zemanian, Armen H. ★ Pristine transfinite graphs and permissive electrical networks. (English summary) **2003j:94129**

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Problems:
Discrete mathematics Research problems [Discrete mathematics]. **2003j:00007**

05–03 Historical (must also be assigned at least one classification number from Section 01)

Gropp, Harald "Réseaux réguliers" or regular graphs. (English summary)
Jajcay, Robert *see* **Jajcayová, Tatiana Baginová, 2003h:05001**
Jajcayová, Tatiana Baginová (*with* Jajcay, Robert) On the contributions of Dale Marsh Mesner. (English summary) **2003h:05001**
Khomenko, N. P. (*with* Vyvrot, T. M.) Development of the theory of 1-factorizations of graphs at the Institute of Mathematics of the Ukrainian Academy of Sciences. (Ukrainian. Ukrainian summary) (*see* **2003b:01062**)
(Kleitman, Daniel J.) *see* **Saks, Michael, 2003k:05002**
(Mesner, Dale Marsh) *see* **Jajcayová, Tatiana Baginová, 2003h:05001**
Saks, Michael Kleitman and combinatorics. (English summary) **2003k:05002**
Vyvrot, T. M. *see* **Khomenko, N. P., (2003b:01062)**

Items with secondary classifications in 05–03

Berge, Claude (*with* Ramírez Alfonsín, J. L.) Origins and genesis. **2003e:05055**
— *see also* **Rosenstiehl, Pierre, 2003k:01033**
Blair, Ann *see* **Kruja, Eriola et al., (2003k:68004)**
Grattan-Guinness, Ivor Re-interpreting '⅄': Kempe on multisets and Peirce on graphs, 1886–1905. **2003j:01013**
Jiménez Urroz, Jorge De partitione numerorum. (Spanish) **2003j:01049**
(Kempe, A. B.[1]) *see* **Grattan-Guinness, Ivor, 2003j:01013**
Klaška, Jiří Birkhoff's combinatorial problem on the number of orderings and its history. (Czech) **2003g:01033**
(Kleitman, Daniel J.) *see* **Peck, G. W., 2003i:01034**
Kruja, Eriola (*with* Marks, Joe; Blair, Ann; Waters, Richard) A short note on the history of graph drawing. (English summary) (*see* **2003k:68004**)
Mačák, Karel Remarks on the development of combinatorics in the 16th and 17th centuries. (Czech) (*see* **2003a:01001**)
Marks, Joe *see* **Kruja, Eriola et al., (2003k:68004)**
Peck, G. W. Kleitman and combinatorics: a celebration. (English summary) **2003i:01034**
(Peirce, Charles Sanders) *see* **Grattan-Guinness, Ivor, 2003j:01013**
Pérez Canals, Enric Combinatorics and quantum theory, 1910–1914. (Spanish. English and Spanish summaries) **2003k:81007**
Ramírez Alfonsín, J. L. *see* **Berge, Claude, 2003e:05055**
Richmond, L. Bruce W. T. Tutte (1917–2002).
Rosenstiehl, Pierre Claude Berge, ses graphes et hypergraphes. [Claude Berge and his graphs and hypergraphs] **2003k:01033**
Šišma, Pavel The origin and development of graph theory. (Czech) **2003g:01002**
(Tutte, William) *see* **Richmond, L. Bruce**
Waters, Richard *see* **Kruja, Eriola et al., (2003k:68004)**

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Peck, G. W. *see* **Peck, G. W., 2003i:01034**
Biography:
Kleitman, Daniel J. *see* **Peck, G. W., 2003i:01034**
Obituary:
Tutte, William Thomas *see* **Richmond, L. Bruce**

05–04 Explicit machine computation and programs (not the theory of computation or programming)

Sawada, Joe A fast algorithm for generating nonisomorphic chord diagrams. (English summary) **2003h:05002**

Items with secondary classifications in 05–04

Bader, David A. (*with* Moret, Bernard M. E.; Yan, Mi) A linear-time algorithm for computing inversion distance between signed permutations with an experimental study. (English summary) **2003i:68102**
Hu, Te Chiang (*with* Shing, M. T.) ★ Combinatorial algorithms. (English summary) **2003c:90001**
Moret, Bernard M. E. *see* **Bader, David A. et al., 2003i:68102**
Shing, M. T. *see* **Hu, Te Chiang, 2003c:90001**
Yan, Mi *see* **Bader, David A. et al., 2003i:68102**

05–06 Proceedings, conferences, collections, etc.

(Arasu, K. T.) *see* **Codes and designs, 2003g:05002**
(Bollobás, Béla) *see* **Contemporary combinatorics, 2003b:05002**
(Broersma, Hajo J.) *see* **Workshop: Graphs and Combinatorial Optimization, 2003m:05001**
(Chopra, Dharam V.) *see* **MCCCC**
(Colbourn, Charles J.) *see* **In honour of Ronald C. Mullin**
(Cowen, Lenore J.) *see* **Kleitman and combinatorics: a celebration**
(Cvetković, Dragoš M.) *see* **Special Issue: Algebraic graph theory**
(Faigle, Ulrich) *see* **Workshop: Graphs and Combinatorial Optimization, 2003m:05001**
(Griggs, Jerrold R.) *see* **Kleitman and combinatorics: a celebration**
(Haemers, Willem H.) *see* **Special Issue: Algebraic graph theory**
(Harary, Frank) *see* **Graph theory and discrete geometry**
(Hoede, Cornelis) *see* **Workshop: Graphs and Combinatorial Optimization, 2003m:05001**
(Hurink, Johann) *see* **Workshop: Graphs and Combinatorial Optimization, 2003m:05001**
(Kleitman, Daniel J.) *see* **Kleitman and combinatorics: a celebration**
(Linhares-Sales, Cláudia) *see* **Recent advances in algorithms and combinatorics, 2003g:05003**
(Mullin, Ronald C.) *see* **In honour of Ronald C. Mullin**
(Ray-Chaudhuri, Dijen K.) *see* **Codes and designs, 2003g:05002**
(Reed, Bruce A.) *see* **Recent advances in algorithms and combinatorics, 2003g:05003**
(van Rees, G. H. John) *see* **In honour of Ronald C. Mullin**
(Rowlinson, P.) *see* **Special Issue: Algebraic graph theory**
(Seress, Ákos) *see* **Codes and designs, 2003g:05002**
(Stinson, Douglas R.) *see* **In honour of Ronald C. Mullin**
(West, Douglas B.) *see* **Kleitman and combinatorics: a celebration**

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Cambridge, MA ★ Kleitman and combinatorics: a celebration.
Codes and designs ★ Codes and designs. **2003g:05002**
Columbus, OH ★ Codes and designs. **2003g:05002**
Conference:
Combinatorics, Cryptography, and Computing ★ {14th MCCCC}.
Graph Theory ★ {Conference on Graph Theory}.
Contemporary combinatorics ★ Contemporary combinatorics. **2003b:05002**

Edinburgh ★ Special issue on algebraic graph theory.
Elgersburg ★ {Conference on Graph Theory}.
Enschede ★ 6th Twente Workshop on Graphs and Combinatorial Optimization. **2003m:05001**
Festschrift:
Harary, Frank ★ Graph theory and discrete geometry.
Kleitman, Daniel J. ★ Kleitman and combinatorics: a celebration.
Mullin, Ronald C. ★ {In honour of Ronald C. Mullin}.
Ray-Chaudhuri, Dijen K. ★ Codes and designs. **2003g:05002**
Graph theory and discrete geometry ★ Graph theory and discrete geometry.
Hunter Valley ★ 11th Australasian Workshop on Combinatorial Algorithms.
In honour of Ronald C. Mullin ★ {In honour of Ronald C. Mullin}.
Kleitman and combinatorics: a celebration ★ Kleitman and combinatorics: a celebration.
Manila ★ Graph theory and discrete geometry.
MCCCC ★ {14th MCCCC}.
Messina ★ 6th Workshop on Combinatorics.
Recent advances in algorithms and combinatorics ★ Recent advances in algorithms and combinatorics. **2003g:05003**
Special Issue:
Algebraic graph theory ★ Special issue on algebraic graph theory.
Wichita, KS ★ {14th MCCCC}.
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Combinatorial Algorithms ★ 11th Australasian Workshop on Combinatorial Algorithms.
Combinatorics ★ 6th Workshop on Combinatorics.
Graphs and Combinatorial Optimization ★ 6th Twente Workshop on Graphs and Combinatorial Optimization. **2003m:05001**

Items with secondary classifications in 05–06

(Agarwal, Ashok Kumar[1]) *see* **Number theory and discrete mathematics, 2003i:00009**
(Bannai, Eiichi) *see* **Conference: Association Schemes, Codes and Designs**
(Bartolone, Claudio G.) *see* **Combinatorics '98**
(Berndt, Bruce C.) *see* **Number theory and discrete mathematics, 2003i:00009**
(Brandstädt, Andreas) *see* **Graph-theoretic concepts in computer science, 2003a:68015**
(Calude, Cristian S.) *see* **Combinatorics, computability and logic, 2003d:00011**
(Chauvin, Brigitte) *see* **Mathematics and computer science, 2003e:00031**
(Colbourn, Charles J.) *see* **Papers on the occasion of the 65th birthday of Alex Rosa**
(Dinitz, Jeffrey H.) *see* **Papers on the occasion of the 65th birthday of Alex Rosa**
(Dinneen, Michael J.) *see* **Combinatorics, computability and logic, 2003d:00011**
(Erdős, Paul[1]) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Flajolet, Philippe) *see* **Mathematics and computer science, 2003e:00031**
(Fronček, Dalibor) *see* **Papers on the occasion of the 65th birthday of Alex Rosa**
(Gardy, Danièle) *see* **Mathematics and computer science, 2003e:00031**
(Halász, Gábor) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Harary, Frank) *see* **Combinatorics, computability and logic, 2003d:00011**
(Imai, Hiroshi) *see* **Conference: Computing and Combinatorics**
(Janowitz, Melvin F.) *see* **Conference: Ordinal and Symbolic Data Analysis**
(Jünger, Michael) *see* **Graph drawing, 2003k:68004**
(Kageyama, Sanpei) *see* **Experimental design and related combinatorics**
(Kozlov, V. Ya.) *see* **Proceedings in discrete mathematics, 2003a:00018**
(Krattenthaler, Christian F.) *see* **Number theory and discrete mathematics, 2003i:00009**
(Labelle, Gilbert) *see* **Conference: Combinatorics, Computer Science and Applications**
(Le, Van Bang) *see* **Graph-theoretic concepts in computer science, 2003a:68015**
(Leipert, Sebastian) *see* **Graph drawing, 2003k:68004**
(Leroux, Pierre) *see* **Conference: Combinatorics, Computer Science and Applications**
(Lovász, László) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Mokkadem, Abdelkader) *see* **Mathematics and computer science, 2003e:00031**
(Mullen, Gary L.) *see* **Number theory and discrete mathematics, 2003i:00009**
(Mullin, Ronald C.) *see* **Special Issue: Mullin, Ronald C.**
(Munemasa, Akihiro) *see* **Conference: Association Schemes, Codes and Designs**
(Mutzel, Petra) *see* **Graph drawing, 2003k:68004**
(Nowakowski, Richard J.) *see* **More games of no chance, 2003m:91004**
(Ramachandra, Kanakanahalli) *see* **Number theory and discrete mathematics, 2003i:00009**
(Rosa, Alexander) *see* **Papers on the occasion of the 65th birthday of Alex Rosa**
(Sachkov, V. N.) *see* **Proceedings in discrete mathematics, 2003a:00017**
(Sburlan, Silviu) *see* **Combinatorics, computability and logic, 2003d:00011**
(Shahrokhi, Farhad) *see* **Discrete and computational geometry and graph drawing**
(Shioura, Akiyoshi) *see* **Workshop: Discrete Systems and Algorithms**
(Shirakura, Teruhiro) *see* **Experimental design and related combinatorics**
(Simonovits, Miklós) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Song, Sung-Yell) *see* **Conference: Association Schemes, Codes and Designs**
(Sós, Vera T.) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Székely, László A.) *see* **Discrete and computational geometry and graph drawing**
(Terwilliger, Paul) *see* **Conference: Association Schemes, Codes and Designs**
(Tokuyama, Takeshi) *see* **Conference: Computing and Combinatorics** *and* **Workshop: Discrete Systems and Algorithms**
(Waldschmidt, Michel) *see* **Number theory and discrete mathematics, 2003i:00009**
(Wang, Jie[1]) *see* **Computing and combinatorics, 2003e:68005**
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05Axx Enumerative combinatorics

05A05 Combinatorial choice problems (subsets, representatives, permutations)

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Atkinson, Mike D. (*with* Stitt, T.) Restricted permutations and the wreath product. (English summary) **2003j:05001**
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05A10 Factorials, binomial coefficients, combinatorial functions [see also 11B65, 33Cxx]

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05A19 Combinatorial identities

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05B07 Triple systems

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05B10 Difference sets (number-theoretic, group-theoretic, etc.) [see also 11B13]

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05B15 Orthogonal arrays, Latin squares, Room squares

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05B20 Matrices (incidence, Hadamard, etc.)

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05B25 Finite geometries [see also 51D20, 51Exx]

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05B40 Packing and covering [see also 11H31, 52C15, 52C17]

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05Cxx Graph theory {For applications of graphs, see 68R10, 90C35, 94C15.}

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05C60 Isomorphism problems (reconstruction conjecture, etc.)

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05C62 Graph representations (geometric and intersection representations, etc.)

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05E15 Combinatorial problems concerning the classical groups [see also 22E45, 33C80]

Adin, Ron M. (*with* Brenti, Francesco; Roichman, Yuval) Descent numbers and major indices for the hyperoctahedral group. (English summary) **2003m:05211**
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Ding, Kequan Rook placements and classification of partition varieties $B\backslash M_\lambda$. (English summary) **2003a:05154**
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Buch, Anders Skovsted A Littlewood-Richardson rule for the K-theory of Grassmannians. **2003j:14062**
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Yoshinaga, Masahiko The primitive derivation and freeness of multi-Coxeter arrangements. (English summary) **2003k:32039**
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05E20 Group actions on designs, geometries and codes

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Kerber, Adalbert Constructing finite unlabeled structures using group actions. (English summary) **2003j:05131**
Mnukhin, V. B. (*with* Siemons, Johannes) On modular homology of simplicial complexes: saturation. (English summary) **2003e:52022**
Östergård, Patric R. J. Classifying subspaces of Hamming spaces. (English summary) **2003i:94060**
Russeva, Radka Peneva Self-dual [24, 12, 8] quaternary codes with a nontrivial automorphism of order 3. (English summary) **2003d:94113**
Siemons, Johannes *see* **Mnukhin, V. B., 2003e:52022**

05E25 Group actions on posets and homology groups of posets [see also 06A11]

Biane, Philippe Parking functions of types A and B. (English summary) **2003f:05129**
Hersh, Patricia Two generalizations of posets of shuffles. (English summary) **2003b:05158**
Hultman, Axel Polygraph arrangements. (English summary) **2003i:05137**
— Quotient complexes and lexicographic shellability. (English summary) **2003j:05130**
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White, Dennis E. (*with* Williamson, S. Gill) Research problem: combinatorial and multilinear aspects of sign-balanced posets. (English summary) **2003a:05157**
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Duval, Art M. Algebraic shifting and spectral sequences. (English summary) **2003c:18015**
Kalai, Gil Algebraic shifting. (English summary) **2003e:52024**

05E30 Association schemes, strongly regular graphs

Bailey, R. A. Suprema and infima of association schemes. (English summary) **2003f:05130**
Bang, Sejeong (*with* Song, Sung-Yell) Characterization of maximal rational circulant association schemes. (English summary) **2003m:05215**
Bannai, Etsuko Bose-Mesner algebras associated with four-weight spin models. (English summary) **2003a:05158**
Cameron, Peter J. (*with* Stark, Dudley) A prolific construction of strongly regular graphs with the n-e.c. property. (English summary) **2003h:05190**
Caughman, John S., IV The parameters of bipartite Q-polynomial distance-regular graphs. (English summary) **2003f:05131**
Fiedler, Frank[2] (*with* Klin, Mikhail; Muzychuk, Mikhail) Small vertex-transitive directed strongly regular graphs. (English summary) **2003g:05133**
Fiol, M. A. (*with* Garriga, E.) An algebraic characterization of completely regular codes in distance-regular graphs. (English summary) **2003b:05159**
— (*with* Garriga, E.) Pseudo-strong regularity around a set. (English summary) **2003b:05160**
Fujisaki, Tatsuya A four-class association scheme derived from a hyperbolic quadric in $\mathrm{PG}(3, q)$.
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Go, Junie T. The Terwilliger algebra of the hypercube. (English summary) **2003e:05150**
— (*with* Terwilliger, Paul) Tight distance-regular graphs and the subconstituent algebra. (English summary) **2003i:05138**
Guo, Jun[1] Construction of some association schemes. (Chinese. English and Chinese summaries)
Hamilton, Nicholas Strongly regular graphs from differences of quadrics. (English summary) **2003c:05224**
Hanaki, Akihide Locality of a modular adjacency algebra of an association scheme of prime power order. (English summary) **2003h:05191**
— (*with* Hirasaka, Mitsugu) Theory of Hecke algebras to association schemes. (English summary) **2003g:05134**
Hiraki, Akira (*with* Koolen, Jack H.) An improvement of the Godsil bound. (English summary) **2003j:05132**
— The number of columns $(1, k-2, 1)$ in the intersection array of a distance-regular graph.
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— (*with* Muzychuk, Mikhail) Association schemes generated by a non-symmetric relation of valency 2. (English summary) **2003a:05159**
— (*with* Muzychuk, Mikhail; Zieschang, Paul-Hermann) A generalization of Sylow's theorems on finite groups to association schemes. **2003k:05141**
— Sufficient conditions for meta-thin association schemes to have a transitive automorphism group. (Japanese)
— *see also* **Hanaki, Akihide, 2003g:05134**
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Jurišić, Aleksandar (*with* Koolen, Jack H.) Krein parameters and antipodal tight graphs with diameter 3 and 4. (English summary) **2003a:05160**
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Koolen, Jack H. (*with* Moulton, Vincent) On a conjecture of Bannai and Ito: there are finitely many distance-regular graphs with degree 5, 6 or 7. (English summary) **2003k:05142**
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Ma, Changli (*with* Wang, Yang-xian) Automorphisms of association schemes of quadratic forms over a finite field of characteristic two. (English summary) **2003m:05217**
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— On strongly regular graphs with $k = 2\mu$ and their extensions. (Russian. Russian summary) **2003e:05151**
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Miklavič, Štefko Valency of distance-regular antipodal graphs wtih diameter 4. (English summary) **2003i:05139**
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Nomura, Kazumasa A property of solutions of modular invariance equations for distance-regular graphs. **2003b:05162**
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Peeters, René On the p-ranks of the adjacency matrices of distance-regular graphs. (English summary) **2003a:05161**
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Song, Sung-Yell Fusion relation in products of association schemes. (English summary) **2003i:05140**
— *see also* **Bang, Sejeong, 2003m:05215**
Stark, Dudley *see* **Cameron, Peter J., 2003h:05190**
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Terwilliger, Paul The subconstituent algebra of a distance-regular graph; thin modules with endpoint one. (English summary) **2003j:05135**
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De Clerck, Frank (*with* Delanote, Mario; Hamilton, Nicholas; Mathon, Rudolf) Perp-systems and partial geometries. (English summary) **2003g:51002**
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Egge, Eric S. The generalized Terwilliger algebra and its finite-dimensional modules when $d = 2$. (English summary) **2003b:16012**
Evdokimov, S. A. (*with* Ponomarenko, I. N.) Rings of finite projective planes and their isomorphisms. (Russian. English and Russian summaries) **2003g:51005**
Fiol, M. A. Algebraic characterizations of distance-regular graphs. (English summary) **2003d:05179**
Greig, Malcolm (*with* Kreher, Donald L.; Ling, Alan C. H.) On PBIBD designs based on triangular schemes. (English summary) **2003k:05017**
Haemers, Willem H. (*with* Kuijken, Elisabeth) The Hermitian two-graph and its code. (English summary) **2003j:05121**
Hamilton, Nicholas *see* **De Clerck, Frank et al., 2003g:51002**
Hu, Sheng Biao The number of walks and classification of adjacency matrices of strongly regular graphs. (Chinese. English and Chinese summaries)
Jones, Gareth A. (*with* Klin, Mikhail; Moshe, Yossi) Primitivity of permutation groups, coherent algebras and matrices. (English summary) **2003a:20003**
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Li, Feng Gao[2] (*with* Wang, Yang-xian) Subconstituents of dual polar graph in finite classical space. III. (English summary) **2003e:05082**
Ling, Alan C. H. *see* **Greig, Malcolm et al., 2003k:05017**
Makhnev, A. A. On pseudogeometric graphs of some partial geometries. (Russian. English and Russian summaries) **2003m:51009**
Manches, Pierre (*with* Ceroi, Stéphan) Spin models, association schemes and the Nakanishi-Montesinos conjecture. (English summary) **2003j:57020**
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Sun, Hsin-Min PBIB designs and association schemes obtained from finite rings. (English summary) **2003d:05027**
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05E35 Orthogonal polynomials [see also 33C45, 33C50, 33D45]

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Knop, Friedrich Semisymmetric polynomials and the invariant theory of matrix vector pairs. (English summary) **2003b:33029**
König, Wolfgang (*with* O'Connell, Neil; Roch, Sébastien) Non-colliding random walks, tandem queues, and discrete orthogonal polynomial ensembles. (English summary) **2003e:60174**
Lass, Bodo Variations sur le thème $E + \overline{E} = XY$. (English and French summaries) [Variations on the theme $E + \overline{E} = XY$] **2003g:05010**
Mansour, Toufik (*with* Vaĭnshteĭn, A. D.) Layered restrictions and Chebyshev polynomials. (English summary) **2003c:05005**
— (*with* Vaĭnshteĭn, A. D.) Restricted permutations and Chebyshev polynomials. (English summary) **2003a:05003**
O'Connell, Neil *see* **König, Wolfgang et al., 2003e:60174**
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Vaĭnshteĭn, A. D. *see* **Mansour, Toufik, 2003a:05003** *and* **2003c:05005**

05E99 None of the above, but in this section

Ehrenborg, Richard (*with* Readdy, Margaret) Homology of Newtonian coalgebras. (English summary) **2003j:05136**
Readdy, Margaret *see* **Ehrenborg, Richard, 2003j:05136**

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Bayer, Margaret M. (*with* Hetyei, Gábor) Generalizations of Eulerian partially ordered sets, flag numbers, and the Möbius function. (English and French summaries) **2003g:06006**
Bowman, Douglas C. (*with* Bradley, David M.) The algebra and combinatorics of shuffles and multiple zeta values. (English summary) **2003j:05010**
Bradley, David M. *see* **Bowman, Douglas C., 2003j:05010**
Brini, A. (*with* Regonati, F.; Teolis, A. G. B.) Grassmann geometric calculus, invariant theory and superalgebras. **2003b:15039**
Hetyei, Gábor Graphs and balanced simplicial complexes. (English summary) **2003m:05091**
— *see also* **Bayer, Margaret M., 2003g:06006**
Kreimer, Dirk Combinatorics of (perturbative) quantum field theory. (English summary) **2003k:81145**
Malyshev, D. V. Hopf algebra of ribbon graphs and renormalization. (English summary) **2003k:81146**
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Ronco, María O. Eulerian idempotents and Milnor-Moore theorem for certain non-cocommutative Hopf algebras. (English summary) **2003f:16064**
Teolis, A. G. B. *see* **Brini, A. et al., 2003b:15039**

06–XX Order, lattices, ordered algebraic structures [see also 18B35]

06–01 Instructional exposition (textbooks, tutorial papers, etc.)

Davey, B. A. (*with* Priestley, Hilary A.) ★ Introduction to lattices and order. (English summary) **2003e:06001**
Priestley, Hilary A. *see* **Davey, B. A., 2003e:06001**
Schröder, Bernd S. W. ★ Ordered sets. (English summary) **2003k:06001**

Items with secondary classifications in 06–01

Cohn, P. M. ★ Basic algebra. **2003m:00001**
Ene, Viviana ★ Lecţii de teoria mulţimilor. (Romanian summary) [Lessons of set theory]

06–02 Research exposition (monographs, survey articles)

Bruns, Gunter (*with* Harding, John) Algebraic aspects of orthomodular lattices. (*see* **2003a:81014**)
Foulis, David J. Representations on unigroups. **2003e:06002**
Glass, A. M. W. Right ordered groups. (*see* **2003f:06001**)
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Rudeanu, Sergiu ★ Lattice functions and equations. (English summary) **2003c:06001**

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Kaarli, Kalle (*with* Pixley, Alden F.) ★ Polynomial completeness in algebraic systems. (English summary) **2003a:08001**
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Priestley, Hilary A. Ordered sets and complete lattices. A primer for computer science. (English summary)
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06–03 Historical (must also be assigned at least one classification number from Section 01)

Bilová, Štěpánka The development of lattice theory up to 1948. (Czech) (*see* **2003c:01001**)
Klaška, Jiří Historical milestones in the study of special types of orderings. (Czech) (*see* **2003c:01001**)

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(Boole, George) *see* **Freguglia, Paolo**, **2003d:03002**
Freguglia, Paolo The study of algebraic logic at the turn of the twentieth century: the theory of logical equations. (Italian. English summary) **2003d:03002**
Johnstone, Peter T. Elements of the history of locale theory. **2003d:01026**
Klaška, Jiří Birkhoff's combinatorial problem on the number of orderings and its history. (Czech) **2003g:01033**

06–06 Proceedings, conferences, collections, etc.

(Holland, W. Charles) *see* **Ordered algebraic structures: Nanjing**, **2003f:06001**

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(Janowitz, Melvin F.) *see* **Conference: Ordinal and Symbolic Data Analysis**

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Amherst, MA ★ The 1998 Conference on Ordinal and Symbolic Data Analysis (OSDA '98).
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06Axx Ordered sets

06A05 Total order

Cai, Jin-Yi On the impossibility of certain ranking functions. (English summary) **2003i:06001**
Chvalina, Jan *see* **Hort, Daniel et al., 2003g:06001**
Goldstern, Martin R. (*with* Shelah, Saharon) Antichains in products of linear orders. (English summary) **2003j:06001**
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06Bxx Lattices [see also 03G10]

06B05 Structure theory

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06B25 Free lattices, projective lattices, word problems [see also 03D40, 08A50, 20F10]

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06Fxx Ordered structures

06F05 Ordered semigroups and monoids [see also 20Mxx]

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08Axx Algebraic structures [see also 03C05]

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08A05 Structure theory

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Smith, Jonathan D. H. *see* **Romanowska, Anna B.**, **2003i:08001**
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08A35 Automorphisms, endomorphisms

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Machala, František Special incidence structures of type (p, n). II. (English summary) **2003e:06006**

08A40 Operations, polynomials, primal algebras

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— 2-affine complete algebras need not be affine complete. (English summary) **2003g:08003**
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08A45 Equational compactness

Ebrahimi, M. Mehdi *see* **Mahmoudi, Mojgan, 2003i:08005**
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08A50 Word problems [see also 03D40, 06B25, 20F10, 68R15]

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Ježek, Jaroslav Termal groupoids. (English summary) **2003h:20125**
Krapež, Aleksandar Generalized associativity on rectangular quasigroups. (English summary) **2003j:39072**

08A55 Partial algebras

Haddad, Lucien (*with* Simons, G. E.) Maximal partial clones of 4-valued logic. (English summary) **2003j:08005**
Jenča, Gejza A Cantor-Bernstein type theorem for effect algebras. (English summary) **2003m:08007**
Simons, G. E. *see* **Haddad, Lucien, 2003j:08005**
Šlapal, Josef Exponentiality in categories of partial algebras. (English summary) **2003i:08006**

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Dudek, Wiesław A. (*with* Trokhimenko, Valentin S.) Functional Menger $\mathcal{P}$-algebras. (English summary) **2003j:08004**
Dvurečenskij, Anatolij Product effect algebras. (English summary) **2003j:81005**
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Pióro, Konrad The weak subalgebra lattice of a unary partial algebra of a given infinite unary type. (English summary) **2003c:08004**
– Some properties of the weak subalgebra lattice of a partial algebra of a fixed type. (English summary) **2003e:08004**
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Rosenberg, Ivo G. *see* **Haddad, Lucien et al., 2003g:08004**
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08A60 Unary algebras

Chajda, Ivan (*with* Länger, Helmut) A note on normal varieties of monounary algebras. (English summary) **2003c:08008**
Davey, B. A. *see* **Pitkethly, J. G., 2003b:08003**
Halušková, Emília Two element direct limit classes of monounary algebras. (English summary) **2003j:08006**
Hyndman, Jennifer Mono-unary algebras are strongly dualizable. (English summary) **2003c:08009**
Jakubíková-Studenovská, Danica (*with* Kövesiová, Gabriela) On α-pseudodimension of monounary algebras. (English summary) **2003i:08007**
– Homogeneous monounary algebras. **2003h:08004**
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Pitkethly, J. G. Dualisability and algebraic constructions. (English summary) **2003k:08004**
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Hudry, A. Rétractions, corétractions et enveloppe injective d'une algèbre de transitions. (English summary) [Retracts, coretracts and injective hull of an algebra of transitions] **2003g:18001**
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Pitkethly, J. G. Strong and full dualisability: three-element unary algebras. (English summary) **2003g:08016**

08A62 Finitary algebras

Denecke, Klaus *see* **Shtrakov, Slavcho, 2003k:08005**
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Novotný, Miroslav Homomorphisms of algebras. (English summary) **2003f:08001**
Pinus, A. G. (*with* Zhurkov, S. V.) On the length of scales of the computability potentials of n-element algebras. (Russian. Russian summary) **2003g:08008**
Zhurkov, S. V. *see* **Pinus, A. G., 2003g:08008**

08A68 Heterogeneous algebras

Smith, Jonathan D. H. Continued fractions, fibered automata, and a theorem of Rosenberg. (English summary) **2003m:08009**

08A70 Applications of universal algebra in computer science

Benson, D. B. (*with* Nečesal, M.; Rosický, Jiří) Algebras over variable theories. (English summary) **2003i:08008**
Nečesal, M. *see* **Benson, D. B. et al., 2003i:08008**
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Blackburn, Patrick (*with* de Rijke, Maarten; Venema, Yde) ★ Modal logic. (English summary) **2003b:03001**
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Diaconescu, Răzvan Grothendieck institutions. (English summary) **2003h:18004**
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08A72 Fuzzy algebraic structures

Casasnovas, J. (*with* Monserrat, Miquel; Rosselló-Llompart, Francesc) On the semilattice of inner extensions of a fuzzy partial algebra. (English summary) **2003m:08010**
Choban, Mitrofan M. (*with* Kiriyak, L. L.) The homomorphisms of fuzzy algebras. (English summary) **2003d:08006**
Kehagias, Ath. An example of L-fuzzy join space. (English summary) **2003k:08006**
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Ali, T. *see* **Ray, Asok Kumer**
Borzooei, Rajab Ali (*with* Zahedi, Mohammad Mehdi) Fuzzy structures on hyper$K$-algebras. (English summary) **2003b:06019**
Kouchi, H. Moradi *see* **Zahedi, Mohammad Mehdi, 2003g:20116**
Mordeson, John N. Generating sets for T-fuzzy subspaces. (English summary) **2003m:15003**
Ray, Asok Kumer (*with* Ali, T.) Ideals and divisibility in a ring with respect to a fuzzy subset. (English summary)
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Romanowska, Anna B. Algebraic language in the theory of harmony. (English summary) **2003e:00022**

08Bxx Varieties [see also 03C05]

08B05 Equational logic, Mal′cev (Mal′tsev) conditions

Aglianò, P. (*with* Panti, G.) Geometrical methods in Wajsberg hoops. (English summary) **2003j:08008**
Bińczak, Grzegorz Equational bases for weak monounary varieties. (English summary) **2003g:08010**

Bourn, Dominique (*with* Gran, Marino) Centrality and connectors in Maltsev categories. (English summary) **2003m:08011**
Chajda, Ivan (*with* Eigenthaler, Günther) Some modifications of congruence permutability and dually congruence regular varieties. (English summary) **2003a:08004**
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Kaarli, Kalle (*with* Pixley, Alden F.) The decidability of the affine completeness generation problem.
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Bourn, Dominique (*with* Gran, Marino) Centrality and normality in protomodular categories. (English summary) **2003d:18017**
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— Aspherical abelian groupoids and their directions. (English summary) **2003a:18005**
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— (*with* Länger, Helmut) A simple basis of ideal terms of Brouwerian semilattices. (English summary) **2003c:06003**
— (*with* Länger, Helmut) Restricted congruence regularity of algebras. (English summary) **2003j:08002**
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Denecke, Klaus Hyperidentities in semigroups. (English summary) **2003d:20083**
Dolinka, Igor A note on square extensions of bands. (English summary) **2003j:20092**
Goldblatt, Robert Duality for some categories of coalgebras. (English summary) **2003g:03049**
Gran, Marino *see* **Bourn, Dominique, 2003d:18017**
Guo, Wen Bin (*with* Shum, K. P.) Minimal formations of universal algebras. (English summary) **2003b:08004**
Gupta, Chander Kanta (*with* Krasil′nikov, A. N.) A non-finitely based system of polynomial identities which contains the identity $x^6 = 0$. (English summary) **2003c:16031**
Jackson, Marcel On the finite basis problem for finite Rees quotients of free monoids. (English summary) **2003a:20084**
Kaarli, Kalle (*with* Pixley, Alden F.) ★ Polynomial completeness in algebraic systems. (English summary) **2003a:08001**
Krasil′nikov, A. N. On the finiteness of the basis of identities of a variety of associative algebras. (Russian. English and Russian summaries) **2003i:16036**
— *see also* **Gupta, Chander Kanta, 2003c:16031**
Länger, Helmut *see* **Chajda, Ivan, 2003c:06003** *and* **2003j:08002**
Marczak, Adam W. (*with* Płonka, Jerzy) Square extension of a groupoid. (English summary) **2003h:20126**
Pinus, A. G. On rationally and conditionally rationally equivalent algebras. (Russian. Russian summary) **2003f:08009**
Pixley, Alden F. *see* **Kaarli, Kalle, 2003a:08001**
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Romanowska, Anna B. (*with* Smith, Jonathan D. H.) ★ Modes. (English summary) **2003i:08001**
Sela, Z. Diophantine geometry over groups and the elementary theory of free and hyperbolic groups. (English summary) **2003k:20060**
Shum, K. P. *see* **Guo, Wen Bin, 2003b:08004**
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08B10 Congruence modularity, congruence distributivity

Chajda, Ivan (*with* Horváth, Eszter K.) A triangular scheme for congruence distributivity. (English summary) **2003e:08007**
Clasen, Matthias (*with* Valeriote, Matthew) Tame congruence theory. (English summary) **2003e:08008**
Gran, Marino Commutators and central extensions in universal algebra. (English summary) **2003f:08012**
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Horváth, Eszter K. *see* **Chajda, Ivan, 2003e:08007**
Shum, K. P. *see* **Guo, Wen Bin, 2003b:08004**
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Baker, Kirby A. (*with* Wang, Ju) Definable principal subcongruences. (English summary) **2003c:08002**
Chajda, Ivan Semiregularity of congruences implies congruence modularity at 0. (English summary) **2003c:08003**
— Distributivity of lattices of binary relations. (English summary) **2003g:08001**
Kaarli, Kalle (*with* Pixley, Alden F.) The decidability of the affine completeness generation problem.
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Kiss, E. W. *see* **Kearnes, K. A. et al., 2003h:08001**
Lipparini, Paolo A non-trivial congruence implication between identities weaker than modularity. (English summary) **2003i:08004**
Pixley, Alden F. *see* **Kaarli, Kalle**
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Wang, Ju *see* **Baker, Kirby A., 2003c:08002**
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08B15 Lattices of varieties

Abad, Manuel (*with* Diaz Varela, José P.; Zander, Marta) Varieties and quasivarieties of monadic Tarski algebras. (English summary) **2003h:08006**
Arworn, Srichan (*with* Denecke, Klaus) Tree transformations defined by hypersubstitutions. (English summary) **2003c:08010**
— (*with* Denecke, Klaus; Pabhapote, Nittiya) Tree transformations and varieties. (English summary) **2003h:08007**
Barkhudaryan, Artur *see* **Trnková, Věra, 2003c:08011**
Bezhanishvili, Nick Varieties of two-dimensional cylindric algebras. I. Diagonal-free case. (English summary) **2003i:08011**
Denecke, Klaus Hypersubstitutions and algebraic machines. (English summary) **2003g:08012**
— (*with* Leeratanavalee, S.) Kernels of generalized hypersubstitutions. (English summary) **2003g:08013**
— (*with* Koppitz, Jörg; Wismath, Shelly L.) Solid varieties of arbitrary type. (English summary) **2003k:08007**
— (*with* Koppitz, Jörg; Niwczyk, St.) Equational theories generated by hypersubstitutions of type (n). (English summary) **2003i:08012**
— *see also* **Arworn, Srichan et al., 2003c:08010** *and* **2003h:08007**
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Koppitz, Jörg *see* **Denecke, Klaus et al., 2003i:08012** *and* **2003k:08007**
Leeratanavalee, S. *see* **Denecke, Klaus, 2003g:08013**
Niwczyk, St. *see* **Denecke, Klaus et al., 2003i:08012**
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Trnková, Věra (*with* Barkhudaryan, Artur) Some universal properties of the category of clones. (English summary) **2003c:08011**
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Arworn, Srichan (*with* Denecke, Klaus; Pöschel, Reinhard) Closure operators on complete lattices. (English summary) **2003j:08003**
Budd, V. (*with* Denecke, Klaus; Wismath, Shelly L.) Short-solid superassociative type (n) varieties. (English summary) **2003f:08006**
Chajda, Ivan (*with* Länger, Helmut) A note on normal varieties of monounary algebras. (English summary) **2003c:08008**
Denecke, Klaus Hyperidentities in semigroups. (English summary) **2003d:20083**
— (*with* Wismath, Shelly L.) M-solidity testing systems. (English summary) **2003f:08007**
— *see also* **Budd, V. et al., 2003f:08006** *and* **Arworn, Srichan et al., 2003j:08003**
Freese, Ralph S. (*with* Ježek, Jaroslav; Jipsen, Peter; Marković, P.; Maróti, M.; McKenzie, Ralph N.) The variety generated by order algebras. (English summary) **2003f:08003**
Ježek, Jaroslav *see* **Freese, Ralph S. et al., 2003f:08003**
Jipsen, Peter *see* **Freese, Ralph S. et al., 2003f:08003**
Länger, Helmut *see* **Chajda, Ivan, 2003c:08008**
Marković, P. *see* **Freese, Ralph S. et al., 2003f:08003**
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— *see also* **Freese, Ralph S. et al., 2003f:08003**
Petrich, Mario Some relations on the lattice of varieties of completely regular semigroups. (English and Italian summaries) **2003f:20098**
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Varlet, J. C. (*with* Vaz de Carvalho, Júlia) On the varieties $\mathbf{P}_{2m,0}$ of Ockham algebras. (English summary) **2003i:06011**
Vaz de Carvalho, Júlia *see* **Varlet, J. C., 2003i:06011**
Wismath, Shelly L. *see* **Budd, V. et al., 2003f:08006** *and* **Denecke, Klaus, 2003f:08007**

08B20 Free algebras

Cignoli, Roberto (*with* Torrens Torrell, Antoni) Free algebras in varieties of BL-algebras with a Boolean retract. (English summary) **2003g:08014**
Denecke, Klaus (*with* Leeratanavalee, S.) Tree transformations defined by generalized hypersubstitutions. (English summary) **2003i:08013**
Goračinova Ilieva, Lidija *see* **Markovski, Smile,** (**2003d:00012**)
Leeratanavalee, S. *see* **Denecke, Klaus, 2003i:08013**
Markovski, Smile (*with* Goračinova Ilieva, Lidija) Approaches to the problem of constructing free algebras. (English summary) (*see* **2003d:00012**)
Torrens Torrell, Antoni *see* **Cignoli, Roberto, 2003g:08014**

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Aichinger, Erhard 2-affine complete algebras need not be affine complete. (English summary) **2003g:08003**
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Dehornoy, Patrick Study of an identity. (English summary) **2003i:03049**
Denecke, Klaus *see* **Arworn, Srichan et al., 2003j:08003** *and* **Shtrakov, Slavcho, 2003k:08005**
Dolinka, Igor A note on square extensions of bands. (English summary) **2003j:20092**
Harding, John The free orthomodular lattice on countably many generators is a subalgebra of the free orthomodular lattice on three generators. (English summary) **2003f:06013**
Janeva, Biljana *see* **Čupona, Gorgi et al., 2003m:20094**
Ježek, Jaroslav Three-variable equations of posets. (English summary) **2003i:08010**
Laver, Richard (*with* Moody, John A.) Well-foundedness conditions connected with left-distributivity. (English summary) **2003b:20093**
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Shtrakov, Slavcho (*with* Denecke, Klaus) Essential variables and separable sets in universal algebra. (English summary) **2003k:08005**

08B25 Products, amalgamated products, and other kinds of limits and colimits [see also 18A30]

Laradji, Abdallah Inverse limits of algebras as retracts of their direct products. (English summary) **2003k:08008**
Płonka, Jerzy (*with* Szylicka, Z.) Subdirectly irreducible generalized sums of upper semilattice ordered systems of algebras. (English summary) **2003g:08015**
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Arworn, Srichan (*with* Denecke, Klaus) Tree transformations defined by hypersubstitutions. (English summary) **2003c:08010**
— (*with* Denecke, Klaus; Pabhapote, Nittiya) Tree transformations and varieties. (English summary) **2003h:08007**
Bezhanishvili, Guram (*with* Harding, John) Functional monadic Heyting algebras. (English summary) **2003j:06010**
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— (*with* Leeratanavalee, S.) Kernels of generalized hypersubstitutions. (English summary) **2003g:08013**
— (*with* Koppitz, Jörg; Wismath, Shelly L.) Solid varieties of arbitrary type. (English summary) **2003k:08007**
— (*with* Koppitz, Jörg; Niwczyk, St.) Equational theories generated by hypersubstitutions of type (n). (English summary) **2003i:08012**
— (*with* Leeratanavalee, S.) Tree transformations defined by generalized hypersubstitutions. (English summary) **2003i:08013**
— *see also* **Arworn, Srichan et al., 2003c:08010** *and* **2003h:08007**
Harding, John *see* **Bezhanishvili, Guram, 2003j:06010**
Koppitz, Jörg *see* **Denecke, Klaus et al., 2003i:08012** *and* **2003k:08007**
Leeratanavalee, S. *see* **Denecke, Klaus, 2003g:08013** *and* **2003i:08013**
Niwczyk, St. *see* **Denecke, Klaus et al., 2003i:08012**
Pabhapote, Nittiya *see* **Arworn, Srichan et al., 2003h:08007**
Wismath, Shelly L. *see* **Denecke, Klaus et al., 2003k:08007**

08B26 Subdirect products and subdirect irreducibility

Ježek, Jaroslav (*with* Kepka, Tomáš) The factor of a subdirectly irreducible algebra through its monolith. (English summary) **2003e:08009**
Kepka, Tomáš *see* **Ježek, Jaroslav, 2003e:08009**
McKenzie, Ralph N. Recursive inseparability for residual bounds of finite algebras. (English summary) **2003c:08012**
Toghanyan, V. H. Subdirectly irreducible normal and quasinormal algebras with two binary operations. (English summary) **2003h:08008**

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Palma, Cândida (*with* Prata dos Santos, R.) On a subvariety of semi-De Morgan algebras. (English summary) **2003m:06008**
Płonka, Jerzy (*with* Szylicka, Z.) Subdirectly irreducible generalized sums of upper semilattice ordered systems of algebras. (English summary) **2003g:08015**
Prata dos Santos, R. *see* **Palma, Cândida, 2003m:06008**
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08B30 Injectives, projectives

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08Cxx Other classes of algebras

08C05 Categories of algebras [see also 18C05]

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08C10 Axiomatic model classes [see also 03Cxx, in particular 03C60]

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11–XX Number theory

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11–06 Proceedings, conferences, collections, etc.

(Adhikari, Sukumar Das) *see* **Current trends in number theory, 2003c:11002**
(Allen, Jack) *see* **Smarandache notions**
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(Manstavičius, Eugenijus) *see* **Analytic and probabilistic methods in number theory, 2003j:11004**
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(Philipp, Walter) *see* **Number theory for the millennium, 2003h:11002; 2003h:11003; 2003h:11004** *and* **Surveys in number theory, 2003j:11005**
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Sándor, József ★ Geometric theorems, Diophantine equations, and arithmetic functions. (English summary) **2003f:11003**
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(Vostokov, Sergei) *see* **Algebraic number theory and algebraic geometry, 2003e:11001**
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(Xing, Chaoping) *see* **Cryptography and computational number theory, 2003f:11004**
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Analytic and probabilistic methods in number theory ★ Analytic and probabilistic methods in number theory. **2003j:11004**
Automorphic forms and their Dirichlet series ★ Hokei keishiki oyobi soreni fuzui suru Dirikure kyūsū no kenkyū. [Automorphic forms and their Dirichlet series]
Champaign, IL ★ Surveys in number theory. **2003j:11005**
Cohomology of Siegel varieties ★ Cohomology of Siegel varieties.
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Number Theory ★ Current trends in number theory. **2003c:11002**
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Number Theory ★ Number theoretic methods. **2003m:11003**
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Zürich ★ A panorama of number theory or the view from Baker's garden. **2003k:11002**

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(Chern, Shiing-Shen) *see* **Contemporary trends in algebraic geometry and algebraic topology, 2003g:00019**
(Erdős, Paul[1]) *see* **Paul Erdős and his mathematics, 2003h:00022**
(Fu, Lei[1]) *see* **Contemporary trends in algebraic geometry and algebraic topology, 2003g:00019**
(Hain, Richard) *see* **Contemporary trends in algebraic geometry and algebraic topology, 2003g:00019**
(Halász, Gábor) *see* **Paul Erdős and his mathematics, 2003h:00022**
(Helleseth, Tor) *see* **Sequences and their applications, 2003a:94004**
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Erdős, Paul[1] ★ Paul Erdős and his mathematics. I. **2003h:00022**
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11Axx Elementary number theory {For analogues in number fields, see 11R04.}

11A05 Multiplicative structure; Euclidean algorithm; greatest common divisors

Araki, Toru (*with* Kogure, Masayuki; Shibata, Yukio) Combinatorial properties of the divisibility of mn by $am + bn + c$. (English summary) **2003c:11003**
Benito, Manuel (*with* Escribano, José Javier) Small denominators: the Gonzalez Quijano function. (English summary) **2003i:11003**
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Koh, Youngmee (*with* Ree, Sangwook) Divisors of the products of consecutive integers. (English summary) **2003d:11003**
Ree, Sangwook *see* **Koh, Youngmee**, **2003d:11003**
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Huang, Liu Sheng *see* **Luo, Yong Long et al.**, **2003h:11161**
Kubiak, Przemysław Extending the binary gcd algorithms. (English summary) **2003g:11143**
Luo, Yong Long (*with* Huang, Liu Sheng; Zhou, Zhi[2]) A fast algorithm for computing greatest common divisors based on binary multi-precision. (Chinese. English and Chinese summaries) **2003h:11161**
Nalli, Ayse (*with* Taşci, Dursun) The results related with the determinants of GCD-reciprocal LCM matrices and GCUD-reciprocal LCUM matrices. (English summary) **2003m:11048**
— (*with* Taşci, Dursun) The GCD-reciprocal LCM matrices on lcm-closed sets. (English summary) **2003m:11049**
Ribenboim, Paulo The square-free kernel of $x^{2^n} - a^{2^n}$. **2003d:11022**
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11A07 Congruences; primitive roots; residue systems

de A. Moreira, Carlos Gustavo T. Divisibility, congruences and arithmetic modulo n. (Spanish)
Brumatti, Paulo (*with* Koshlukov, Plamen) Chinese remainder theorem, ancient and contemporary.
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Cai, Tian Xin A generalization of E. Lehmer's congruence and its applications. (English summary) **2003b:11002**
Chen, Yong Gao On integers of the form $k2^n + 1$. (English summary) **2003a:11004**
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Dolzmann, Andreas (*with* Sturm, Thomas) Parametric systems of linear congruences. (English summary) **2003k:11003**
Gao, Li[2] (*with* Zhao, Zhen[4]) On the congruence property of Lehmer DH numbers. (Chinese. English and Chinese summaries) [On the congruence property of D. H. Lehmer numbers]
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Alfaro Pastor, Javier (*with* Bosch-Giral, Carlos) Fermat's worst conjecture remains open. (Spanish) **2003c:11008**
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Bui Minh Phong *see* **Fehér, János**, **2003d:11010**
Cai, Tian Xin A congruence involving the quotients of Euler and its applications. I. **2003d:11007**
Chen, Ming[1] *see* **Wu, Xiao-lin et al.**, **2003k:11147**
Cobeli, Cristian (*with* Vâjâitu, Marian; Zaharescu, Alexandru) A class of algebraic-exponential congruences modulo p. (English summary) **2003m:11208**
— (*with* Vâjâitu, Marian; Zaharescu, Alexandru) On the set $ax + bg^x \pmod p$. (English summary) **2003d:11113**
Cooper, Curtis (*with* Parihar, Manjit) On primes in the Fibonacci and Lucas sequences. (English summary) **2003f:11019**
Dubner, Harvey Carmichael numbers of the form $(6m + 1)(12m + 1)(18m + 1)$. (English summary) **2003g:11144**
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— (*with* Sun, Zhi Wei[1]) On systems of linear Diophantine equations and linear congruences. (Chinese. English and Chinese summaries) **2003d:11037**
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11A15 Power residues, reciprocity

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Ji, Chun Gang The number of kth power residues modulo m. (English summary)
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11A25 Arithmetic functions; related numbers; inversion formulas

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Betcher, Jennifer T. (*with* Jaroma, John H.) An extension of the results of Servais and Cramer on odd perfect and odd multiply perfect numbers. **2003k:11006**
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Chen, Fengjuan Finally finite cyclic arithmetic function. (English summary)
Cheng, Lin Feng A result on multiply perfect number. (English and Chinese summaries) **2003m:11005**
Cheng, Xing Ge *see* **Li, Hai Long[2] et al.**
Codecá, P. (*with* Nair, Mohan) Calculating a determinant associated with multiplicative functions. (English and Italian summaries) **2003c:11006**
Costello, Patrick J. New amicable pairs of type $(2, 2)$ and type $(3, 2)$. (English summary) **2003i:11006**
Dehaye, Paul-Olivier On the structure of the group of multiplicative arithmetical functions. (English summary) **2003d:11009**
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El-Kassar, N. On the equations $k\varphi(n) = \varphi(n + 1)$ and $k\varphi(n + 1) = \varphi(n)$. (English summary) **2003g:11001**
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Panaitopol, Laurenţiu On some properties concerning the function $a(n) = n - \varphi(n)$. (English summary) **2003k:11008**
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Shiu, Peter *see* **Hall, R. R., 2003a:11005**
Shonhiwa, Temba On relatively prime decompositions and related results. (English summary) **2003b:11004**
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11B83 Special sequences and polynomials

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11Cxx Polynomials and matrices

11C08 Polynomials [see also 13F20]

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11C20 Matrices, determinants [see also 15A36]

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11Dxx Diophantine equations [see also 11Gxx, 14Gxx]

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11D41 Higher degree equations; Fermat's equation

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11D59 Thue-Mahler equations

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11E41 Class numbers of quadratic and Hermitian forms

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11E45 Analytic theory (Epstein zeta functions; relations with automorphic forms and functions)

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11E70 K-theory of quadratic and Hermitian forms

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11E76 Forms of degree higher than two

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11E81 Algebraic theory of quadratic forms; Witt groups and rings [see also 19G12, 19G24]

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11E88 Quadratic spaces; Clifford algebras [see also 15A63, 15A66]

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11E95 p-adic theory

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11Fxx Discontinuous groups and automorphic forms {For relations with quadratic forms, see 11E45.}

11F03 Modular and automorphic functions

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11F06 Structure of modular groups and generalizations; arithmetic groups [see also 20H05, 20H10, 22E40]

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11F11 Modular forms, one variable

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Mano, Toshiyuki Differential relations for modular forms of level five. (English summary) **2003i:11053**
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Ohyama, Yousuke Differential equations for modular forms of level three. **2003e:11043**
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11F12 Automorphic forms, one variable

Beineke, Jennifer E. (*with* Bump, Daniel) Hidden symmetries for a renormalized integral of Eisenstein series. (English summary) **2003f:11055**
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Bergeron, Nicolas Forme harmonique duale à un cycle quasi-fuchsien. (English and French summaries) [Dual harmonic form to a quasi-Fuchsian cycle] **2003b:58001**
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Farkas, Hershel M. (*with* Kra, Irwin) On theta constant identities and the evaluation of trigonometric sums. **2003k:11067**
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Iwaniec, Henryk ★ Spectral methods of automorphic forms. (English summary) **2003k:11085**
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Kraußhar, Rolf Sören Automorphic forms in Clifford analysis. (English summary) **2003g:30094**
Lee, Min Ho[1] Pseudodifferential operators associated to linear ordinary differential equations. (English summary) **2003h:11043**
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11F20 Dedekind eta function, Dedekind sums

Adiga, Chandrashekar *see* **Bhargava, Srinivasamurthy et al., 2003c:11034**
Ahlgren, Scott (*with* Berndt, Bruce C.; Yee, Ae Ja; Zaharescu, Alexandru) Integrals of Eisenstein series and derivatives of L-functions. **2003f:11056**
Baruah, Nayandeep Deka On some of Ramanujan's identities for eta-functions. (English summary) **2003e:11044**
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Chen, Beifang (*with* Sun, Zhi Wei[1]) Generalizations of Knopp's identity. (English summary) **2003i:11054**
Dilcher, Karl (*with* Girstmair, Kurt) Dedekind sums and uniform distributions. **2003a:11042**
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Girstmair, Kurt Generalized Dedekind sums, correlation of L-series, and the Galois module of $\cot(\pi/N)\cot(m\pi/N)$. **2003k:11064**
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Horie, Taro (*with* Kanou, Naruo) Certain modular functions similar to the Dedekind eta function. (English summary) **2003j:11043**
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Zhang, Wen Peng A hybrid mean value formula of Dedekind sums and Hurwitz zeta-functions. (English summary) **2003c:11035**
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Chen, Beifang Lattice points, Dedekind sums, and Ehrhart polynomials of lattice polyhedra. (English summary) **2003g:52019**
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11F22 Relationship to Lie algebras and finite simple groups

Dong, Chongying (*with* Mason, Geoffrey) Transformation laws for theta functions. **2003d:11063**
Gannon, Terry Postcards from the edge, or snapshots of the theory of generalised moonshine. (English summary) **2003j:11045**
Ivanov, Rossen (*with* Tuite, Michael) Rational generalised moonshine from abelian orbifoldings of the moonshine module. (English summary) **2003g:11040**
— (*with* Tuite, Michael) Some irrational generalised moonshine from orbifolds. (English summary) **2003f:11057**
Kim, Chang Heon (*with* Koo, Ja Kyung) Self-recursion formulas of certain monstrous functions. (English summary) **2003b:11039**
Kondo, Takeshi The calculation of the character of Moonshine VOA. **2003d:11064**
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Matsuo, Atsushi Norton's trace formulae for the Griess algebra of a vertex operator algebra with larger symmetry. (English summary) **2003d:11065**
McKay, John The essentials of Monstrous Moonshine. **2003a:11043**
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Tuite, Michael *see* **Ivanov, Rossen, 2003f:11057** *and* **2003g:11040**

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Carter, Roger W. ★ Representations of the Monster. **2003m:17023**
Yui, Noriko Arithmetic of certain Calabi-Yau varieties and mirror symmetry. **2003d:11093**
Zuber, Jean-Bernard CFT, BCFT, *ADE* and all that. (English summary) **2003k:81215**

11F23 Relations with algebraic geometry and topology

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Murata, Maki Jacobi's identity and two $K3$-surfaces. (English summary) **2003e:11045**
Parshin, A. N. Note on the Siegel formula. **2003h:11042**
Terasoma, Tomohide *see* **Matsumoto, Keiji[1]**
Verrill, Helena A. Picard-Fuchs equations of some families of elliptic curves. (English summary) **2003k:11065**
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Allcock, Daniel (*with* Carlson, James A.; Toledo, Domingo) The complex hyperbolic geometry of the moduli space of cubic surfaces. (English summary) **2003m:32011**
Bruinier, Jan Hendrik ★ Borcherds products on $O(2, l)$ and Chern classes of Heegner divisors. **2003h:11052**
Bryan, Jim Evidence for a conjecture of Pandharipande. (English summary) **2003e:14046**
Carlson, James A. *see* **Allcock, Daniel et al., 2003m:32011**
Dessai, Anand Homotopy complex projective spaces with Pin(2)-action. (English summary) **2003f:58048**
Gava, Edi (*with* Hammou, Amine B.; Morales, Jose F.; Narain, Kumar S.) D1/D5 systems in $\mathcal{N} = 4$ string theories. (English summary) **2003j:81151**
van Geemen, B. *see* **Hulek, Klaus et al., 2003b:11058**
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Hoffman, J. William (*with* Weintraub, Steven H.) The Siegel modular variety of degree two and level three. (English summary) **2003b:11044**
Hulek, Klaus (*with* Spandaw, J.; van Geemen, B.; van Straten, Duco) The modularity of the Barth-Nieto quintic and its relatives. (English summary) **2003b:11058**
Jinzenji, Masao (*with* Sasaki, Toru[2]) $\mathcal{N} = 4$ supersymmetric Yang-Mills theory on orbifold-T^4/Z_2: higher rank case. (English summary) **2003b:81197**
Kondō, Shigeyuki The moduli space of Enriques surfaces and Borcherds products. (English summary) **2003m:14055**
— Borcherds products and algebraic geometry. (Japanese)
Kramer, Jürg (*with* Salvati-Manni, Riccardo) An integral characterizing the Andreotti-Mayer locus. **2003m:11071**
Lozano, Carlos (*with* Mariño, Marcos) Donaldson invariants of product ruled surfaces and two-dimensional gauge theories. (English summary) **2003g:57047**
Mariño, Marcos Topological quantum field theory and four-manifolds. (English summary) **2003f:57064**
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Tanabe, Michimasa On K-flat and K-moonshine-like elements in elliptic cohomology. **2003a:55010**
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11F25 Hecke-Petersson operators, differential operators (one variable)

Bekdemir, Mehmet (*with* Işik, Ahmet) Hecke operators on modular forms. (English summary) **2003b:11040**
Farmer, D. W. (*with* James, Kevin L.) The irreducibility of some level 1 Hecke polynomials. (English summary) **2003e:11046**
Işik, Ahmet *see* **Bekdemir, Mehmet, 2003b:11040**
James, Kevin L. *see* **Farmer, D. W., 2003e:11046**
Jun, Sungtae (*with* Kim, Insuk) Brandt matrices by primitive orders. (English summary) **2003f:11058**
Kilford, L. J. P. Some non-Gorenstein Hecke algebras attached to spaces of modular forms. (English summary) **2003j:11046**
Kim, Insuk *see* **Jun, Sungtae, 2003f:11058**
Lau, Yuk Kam Equidistribution of Hecke eigenforms on the arithmetic surface $\Gamma_0(N)\backslash\mathbf{H}$. (English summary) **2003i:11055**
Lee, Min Ho[1] Pseudodifferential operators associated to linear ordinary differential equations. (English summary) **2003h:11043**
Luo, Wenzhi Equidistribution of Hecke eigenforms on the modular surface. (English summary) **2003k:11066**

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Li, Wen-Ching Winnie The arithmetic of modular forms. **2003a:11077**
Lovejoy, Jeremy The number of partitions into distinct parts modulo powers of 5. (English summary) **2003g:11119**
Okada, Kaoru Hecke eigenvalues for principal split primes and the L-values associated with class characters. (Japanese)
Ono, Ken Differential endomorphisms for modular forms on $\Gamma_0(4)$. (English summary) **2003g:11035**
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Vinogradov, A. I. The reflection operator and the canonical basis. (Russian. English and Russian summaries) **2003j:11057**

11F27 Theta series; Weil representation

Baruah, Nayandeep Deka Modular equations for Ramanujan's cubic continued fraction. (English summary) **2003a:11044**
Bump, Daniel (*with* Pekker, Alexander) On the dimension of the space of theta functions. (English summary) **2003g:11041**
Farkas, Hershel M. (*with* Kra, Irwin) ★ Theta constants, Riemann surfaces and the modular group. (English summary) **2003a:11045**
— (*with* Kra, Irwin) Cosines and triangular numbers. **2003a:11046**
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Grant, David R. Some product formulas for theta functions in one and two variables. **2003a:11047**
Keating, S. F. An infinite family of summation identities. (English summary) **2003e:11047**
Kra, Irwin *see* **Farkas, Hershel M., 2003a:11045; 2003a:11046** *and* **2003k:11067**
Mezzadri, Francesco On the multiplicativity of quantum cat maps. (English summary) **2003f:11059**
Pekker, Alexander *see* **Bump, Daniel, 2003g:11041**
Proskurin, N. V. On the cubic symplectic theta function. (Russian. Russian summary) **2003h:11044**
Richter, Olav K. Theta functions with harmonic coefficients over number fields. (English summary) **2003f:11060**
Zwegers, S. P. Mock θ-functions and real analytic modular forms. (English summary) **2003f:11061**

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— (*with* Shivashankara, K.; Vasuki, K. R.) Some theta function identities and new explicit evaluations of Rogers-Ramanujan continued fraction. **2003d:33032**
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Bachoc, Christine (*with* Venkov, Boris) Modular forms, lattices and spherical designs. (English summary) **2003d:11096**
Baruah, Nayandeep Deka On some of Ramanujan's identities for eta-functions. (English summary) **2003e:11044**
Basu, Anirban Localized tachyons and the g_{cl} conjecture. (English summary) **2003k:81166**
Bertola, Marco Jacobi groups, Jacobi forms and their applications. **2003c:11040**
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— (*with* Chua, Kok Seng; Solé, Patrick) Seven-modular lattices and a septic base Jacobi identity. (English summary) **2003m:11102**
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Kültür, M. Nuri The formation of a differential equation involving the ratio of the Θ-theta functions. (English summary) **2003b:33031**
Lee, Min Ho[1] Modular forms associated to theta functions. (English summary) **2003d:11062**
Lomadze, G. On the number of representations of positive integers by the quadratic forms $x_1^2 + x_2^2 + 4(x_3^2 + \cdots + x_9^2)$ and $x_1^2 + 4(x_2^2 + \cdots + x_9^2)$. (English and Georgian summaries) **2003f:11051**
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Milne, Stephen C. Infinite families of exact sums of squares formulas, Jacobi elliptic functions, continued fractions, and Schur functions. (English summary) **2003m:11060**
Pan, Shu-Yen Local theta correspondence of depth zero representations and theta dichotomy. (English summary) **2003f:11070**
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11F30 Fourier coefficients of automorphic forms

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Odoni, R. W. K. Solution of a generalised version of a problem of Rankin on sums of powers of cusp-form coefficients. **2003m:11067**
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Vinogradov, A. I. On a conjecture of Linnik. II. (Russian. English and Russian summaries) **2003c:11095**
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11F32 Modular correspondences, etc.

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Kohnen, Winfried Lifting modular forms of half-integral weight to Siegel modular forms of even genus. **2003d:11067**
Manickam, M. (*with* Ramakrishnan, B.) On Saito-Kurokawa correspondence of degree two for arbitrary level. (English summary) **2003k:11070**
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Clozel, Laurent (*with* Otal, Jean-Pierre) Unique ergodicité des correspondances modulaires. (English and French summaries) [Unique ergodicity of modular correspondences] **2003g:22003**
Friedberg, Solomon *see* **Bump, Daniel et al., 2003e:11055**
Funke, Jens (*with* Millson, John) Cycles in hyperbolic manifolds of non-compact type and Fourier coefficients of Siegel modular forms. (English summary) **2003d:11070**
Ginzburg, David *see* **Bump, Daniel et al., 2003e:11055**
Ichino, Atsushi Local theta correspondence and R-groups. (Japanese)
Makino, I. *see* **Arakawa, Tsuneo et al., 2003d:11069**
Millson, John *see* **Funke, Jens, 2003d:11070**
Murakawa, Kenji Relations between symmetric power L-functions and spinor L-functions attached to Ikeda lifts. (English summary) **2003c:11044**
Otal, Jean-Pierre *see* **Clozel, Laurent, 2003g:22003**
Satō, Fumihiro *see* **Arakawa, Tsuneo et al., 2003d:11069**

11F33 Congruences for modular and p-adic modular forms [see also 14G20, 22E50]

Boylan, Matthew Exceptional congruences for the coefficients of certain eta-product newforms. (English summary) **2003k:11071**
Ghate, Eknath P. An introduction to congruences between modular forms. **2003g:11042**
— Adjoint L-values and primes of congruence for Hilbert modular forms. (English summary) **2003k:11072**
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Bertolini, Massimo (*with* Darmon, Henri; Iovita, Adrian; Spieß, Michael) Teitelbaum's exceptional zero conjecture in the anticyclotomic setting. (English summary) **2003c:11071**
Bosser, Vincent Congruence properties of the coefficients of the Drinfeld modular invariant. (English summary) **2003i:11058**
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Delbourgo, Daniel $\mathscr{L}$-invariants arising from conjugate measures of $\mathrm{Sym}^2 E$. (English summary) **2003c:11143**
Dummigan, Neil Symmetric square L-functions and Shafarevich-Tate groups. (English summary) **2003g:11052**
Fischman, Ami On the image of Λ-adic Galois representations. (English and French summaries) **2003i:11063**
Goren, Eyal Z. ★ Lectures on Hilbert modular varieties and modular forms. (English summary) **2003c:11038**
Harris, Michael (*with* Tilouine, Jacques) p-adic measures and square roots of special values of triple product L-functions. **2003d:11075**
Hida, Haruzo Control theorems of coherent sheaves on Shimura varieties of PEL type. (English summary) **2003m:11086**
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Katō, Kazuya Tamagawa number conjecture for zeta values. (English summary) **2003k:11108**
(Nicole, Marc-Hubert) *see* **Goren, Eyal Z., 2003c:11038**
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Schmidt, Ralf Some remarks on local newforms for GL(2). (English summary) **2003g:11056**
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Vignéras, Marie-France Correspondance de Langlands semi-simple pour $\mathrm{GL}(n, F)$ modulo $\ell \neq p$. [Semisimple Langlands correspondence for $\mathrm{GL}(n, F)$ modulo $\ell \neq p$] **2003f:11182**
Yamagami, Atsushi On Gouvêa's conjecture on controlling the conductor. (English summary) **2003i:11066**

11F37 Forms of half-integer weight; nonholomorphic modular forms

Barrucand, Pierre (*with* Hirschhorn, Michael D.) Formulae associated with 5, 7, 9 and 11 squares. (English summary) **2003b:11042**
Funke, Jens Heegner divisors and nonholomorphic modular forms. (English summary) **2003k:11073**
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Horie, Taro (*with* Kanou, Naruo) On certain modular functions derived from modular forms of weight 1/2. (English summary)
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Kojima, Hisashi Remark on the dimension of Kohnen's spaces of half integral weight with square free level. (English summary) **2003c:11036**
Kudla, Stephen S. Derivatives of Siegel Eisenstein series and arithmetic. **2003g:11043**
Lewis, John B.[2] (*with* Zagier, Don) Period functions for Maass wave forms. I. **2003d:11068**
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Horie, Taro (*with* Kanou, Naruo) Certain modular functions similar to the Dedekind eta function. (English summary) **2003j:11043**
Iwaniec, Henryk ★ Spectral methods of automorphic forms. (English summary) **2003k:11085**
Kanou, Naruo *see* **Horie, Taro, 2003j:11043**
Kohnen, Winfried Lifting modular forms of half-integral weight to Siegel modular forms of even genus. **2003d:11067**
Kudla, Stephen S. Derivatives of Eisenstein series and arithmetic geometry. (English summary) **2003k:11069**
Lovejoy, Jeremy (*with* Ono, Ken) Extension of Ramanujan's congruences for the partition function modulo powers of 5. **2003c:11136**
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O'Sullivan, Cormac Identities from the holomorphic projection of modular forms. **2003m:11064**
— *see also* **Chinta, Gautam et al., 2003b:11037**
Ramakrishnan, B. On the Eichler-Zagier map. (English summary) **2003h:11049**
Suzuki, Masatosi The analogue of Eichler-Selberg's trace formula for the non-holomorphic automorphic forms on the upper half space. (Japanese)

11F41 Hilbert and Hilbert-Siegel modular groups and their modular and automorphic forms; Hilbert modular surfaces [see also 14J20]

Baba, Srinath (*with* Chakraborty, Kalyan; Petridis, Yiannis N.) On the number of Fourier coefficients that determine a Hilbert modular form. (English summary) **2003c:11037**
Beineke, Jennifer E. Renormalization of certain integrals defining triple product L-functions. (English summary) **2003b:11043**
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Deutsch, Jesse Ira A computational approach to Hilbert modular group fixed points. (English summary) **2003a:11048**
Goren, Eyal Z. ★ Lectures on Hilbert modular varieties and modular forms. (English summary) **2003c:11038**
Grundman, Helen G. (*with* Lippincott, L. E.) Hilbert modular threefolds of arithmetic genus one. (English summary) **2003h:11046**
Hamahata, Yoshinori Representations of finite groups and Hilbert modular forms. (English summary) **2003i:11056**
Lippincott, L. E. *see* **Grundman, Helen G., 2003h:11046**
(Nicole, Marc-Hubert) *see* **Goren, Eyal Z., 2003c:11038**
Petridis, Yiannis N. *see* **Baba, Srinath et al., 2003c:11037**
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Dou, Ze-Li A note on a lemma of Shimura. (English summary) **2003i:11060**
Ellenberg, Jordan S. Finite flatness of torsion subschemes of Hilbert-Blumenthal abelian varieties. (English summary) **2003c:11062**
Ghate, Eknath P. Adjoint L-values and primes of congruence for Hilbert modular forms. (English summary) **2003k:11072**
Hida, Haruzo Control theorems of coherent sheaves on Shimura varieties of PEL type. (English summary) **2003m:11086**
Okada, Kaoru Hecke eigenvalues for real quadratic fields. (English summary) **2003k:11078**
Richter, Olav K. Theta functions with harmonic coefficients over number fields. (English summary) **2003f:11060**

11F46 Siegel modular groups and their modular and automorphic forms

Andrianov, Anatoliĭ N. Theta-transforms and even zeta functions of Siegel modular forms. **2003k:11074**
Arakawa, Tsuneo (*with* Makino, I.; Satō, Fumihiro) Converse theorem for not necessarily cuspidal Siegel modular forms of degree 2 and Saito-Kurokawa lifting. **2003d:11069**
Barcau, Mugurel (*with* Buium, Alexandru) Siegel differential modular forms. **2003g:11044**
Bertrand, Daniel (*with* Zudilin, V. V.) On the transcendence degree of the differential field generated by Siegel modular forms. **2003m:11070**
Buium, Alexandru *see* **Barcau, Mugurel, 2003g:11044**
Friedland, M. (*with* Sankaran, G. K.) Das Titsgebäude von Siegelschen Modulgruppen vom Geschlecht 2. (English summary) [The Tits building of Siegel modular groups of genus 2] **2003c:11039**
Funke, Jens (*with* Millson, John) Cycles in hyperbolic manifolds of non-compact type and Fourier coefficients of Siegel modular forms. (English summary) **2003d:11070**
Hafner, James Lee (*with* Walling, Lynne H.) Siegel modular forms and Hecke operators in degree 2. **2003k:11075**

Hoffman, J. William (*with* Weintraub, Steven H.) The Siegel modular variety of degree two and level three. (English summary) **2003b:11044**
Horie, Taro Functional equations of Eisenstein series of degree 2. (English summary) **2003e:11050**
Hulek, Klaus (*with* Sankaran, G. K.) The geometry of Siegel modular varieties. **2003h:11047**
Ibukiyama, Tomoyoshi Vector-valued Siegel modular forms of Sym(4) and Sym(6). (Japanese)
Itoh, Tsuyoshi A computation of minimal polynomials of special values of Siegel modular functions. (English summary) **2003k:11076**
Kohnen, Winfried (*with* Kuss, Michael) Some numerical computations concerning spinor zeta functions in genus 2 at the central point. (English summary) **2003i:11057**
Kramer, Jürg (*with* Salvati-Manni, Riccardo) An integral characterizing the Andreotti-Mayer locus. **2003m:11071**
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Makino, I. *see* **Arakawa, Tsuneo et al.**, **2003d:11069**
Millson, John *see* **Funke, Jens**, **2003d:11070**
Poor, Cris (*with* Yuen, David S.) Restriction of Siegel modular forms to modular curves. (English summary) **2003g:11045**
— Computations of spaces of Siegel modular cusp forms. (English summary)
Rastegar, Arash On correspondences on Siegel spaces. (English summary) **2003b:11045**
Salvati-Manni, Riccardo *see* **Kramer, Jürg**, **2003m:11071**
Sankaran, G. K. *see* **Friedland, M.**, **2003c:11039** *and* **Hulek, Klaus**, **2003h:11047**
Satō, Fumihiro *see* **Arakawa, Tsuneo et al.**, **2003d:11069**
Walling, Lynne H. *see* **Hafner, James Lee**, **2003k:11075**
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Yoshida, Hiroyuki[1] Motives and Siegel modular forms. (English summary) **2003d:11071**
— Motives and Siegel modular forms. (Japanese. Japanese summary)
Yuen, David S. *see* **Poor, Cris**, **2003g:11045**
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— On diagonalization of singular Frobenius operators on Siegel modular forms. (English summary) **2003m:11073**
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Hafner, James Lee (*with* Walling, Lynne H.) Explicit action of Hecke operators on Siegel modular forms. (English summary) **2003a:11052**
Kim, Dae San Hodges' Kloosterman sums. (English summary) **2003k:11182**
Kohnen, Winfried Lifting modular forms of half-integral weight to Siegel modular forms of even genus. **2003d:11067**
Koike, Kenji On the family of pentagonal curves of genus 6 and associated modular forms on the ball. (English summary) **2003j:14036**
Kozima, Noritomo Standard L-functions attached to alternating tensor valued Siegel modular forms. **2003a:11053**
Kudla, Stephen S. Derivatives of Eisenstein series and generating functions for arithmetic cycles. **2003a:11070**
Manickam, M. (*with* Ramakrishnan, B.) On Saito-Kurokawa correspondence of degree two for arbitrary level. (English summary) **2003k:11070**
Murakawa, Kenji Relations between symmetric power L-functions and spinor L-functions attached to Ikeda lifts. (English summary) **2003c:11044**
Ramakrishnan, B. On the Eichler-Zagier map. (English summary) **2003h:11049**
— *see also* **Manickam, M.**, **2003k:11070**
Richter, Olav K. Theta functions with harmonic coefficients over number fields. (English summary) **2003f:11060**
Walling, Lynne H. *see* **Hafner, James Lee**, **2003a:11052**
Wang, Juping Singularity conjecture and constructions of Jacobi forms. (English summary) **2003f:11064**

11F50 Jacobi forms

Bertola, Marco Jacobi groups, Jacobi forms and their applications. **2003c:11040**
Choie, Youngju (*with* Eholzer, Wolfgang) Jacobi forms and generalized RC-algebras. (English summary) **2003d:11072**
— (*with* Jeong, Eunkyung) Jacobi forms over totally real fields and codes over $\mathbb{F}_p$. (English summary) **2003j:11049**
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Heim, Bernhard E. L-functions for Jacobi forms and the basis problem. (English summary) **2003a:11049**
Jeong, Eunkyung *see* **Choie, Youngju**, **2003j:11049**
Kim, Haesuk Differential operators on Hermitian Jacobi forms. (English summary) **2003g:11047**
Lee, Min Ho[1] Jacobi-like forms and power series bundles. (English summary) **2003h:11048**
Manickam, M. On skew-holomorphic Jacobi forms. **2003e:11051**
Ramakrishnan, B. On the Eichler-Zagier map. (English summary) **2003h:11049**
Solé, Patrick *see* **Choie, Youngju**, **2003c:11041**
Spiridonov, V. P. *see* **van Diejen, J. F.**, **2003g:11046**
Wang, Juping L-functions of Jacobi forms with Shimura type. (English summary) **2003c:11042**
— Singularity conjecture and constructions of Jacobi forms. (English summary) **2003f:11064**

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Arakawa, Tsuneo Vanishing of certain spaces of cusp forms with small weights and some applications.
Dong, Chongying (*with* Mason, Geoffrey) Transformation laws for theta functions. **2003d:11063**
Lee, Min Ho[1] Modular forms associated to theta functions. (English summary) **2003d:11062**
Manickam, M. (*with* Ramakrishnan, B.) On Saito-Kurokawa correspondence of degree two for arbitrary level. (English summary) **2003k:11070**
Mason, Geoffrey *see* **Dong, Chongying**, **2003d:11063**
Ramakrishnan, B. *see* **Manickam, M.**, **2003k:11070**

11F52 Modular forms associated to Drinfel′d modules

Böckle, Gebhard Global L-functions over function fields. **2003e:11052**
Bosser, Vincent Congruence properties of the coefficients of the Drinfeld modular invariant. (English summary) **2003i:11058**
Hamahata, Yoshinori On a product expansion for the Drinfeld discriminant function. (English summary) **2003h:11050**
Longhi, Ignazio Non-Archimedean integration and elliptic curves over function fields. (English summary) **2003h:11051**

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Laumon, Gérard La correspondance de Langlands sur les corps de fonctions (d'après Laurent Lafforgue). [The Langlands correspondence on function fields (following Laurent Lafforgue)] **2003b:11052**

11F55 Other groups and their modular and automorphic forms (several variables)

Aoki, Hiroki The graded ring of Hermitian modular forms of degree 2. **2003k:11077**
Bruinier, Jan Hendrik (*with* Kuss, Michael) Eisenstein series attached to lattices and modular forms on orthogonal groups. (English summary) **2003g:11048**
— ★ Borcherds products on $O(2, l)$ and Chern classes of Heegner divisors. **2003h:11052**
— On the rank of Picard groups of modular varieties attached to orthogonal groups. (English summary) **2003h:11053**
Dern, Tobias Paramodular forms of degree 2 and level 3. (English summary) **2003m:11072**
Foth, Tatyana Bohr-Sommerfeld tori and relative Poincaré series on a complex hyperbolic space. (English summary) **2003a:11050**
Holzapfel, Rolf-Peter Jacobi theta embedding of a hyperbolic 4-space with cusps. (English summary) **2003d:11073**
Kuss, Michael *see* **Bruinier, Jan Hendrik**, **2003g:11048**
Lansky, Joshua M. (*with* Pollack, David) Hecke algebras and automorphic forms. (English summary) **2003a:11051**
Lee, Min Ho[1] Mixed automorphic forms and Whittaker vectors. (English summary) **2003b:11046**
Matsumoto, Keiji[1] Automorphic functions on the real 3-dimensional half space. (Japanese)
Murase, Atsushi (*with* Sugano, Takashi) Fourier-Jacobi expansion of Eisenstein series on unitary groups of degree three. (English summary) **2003f:11065**
— (*with* Sugano, Takashi) Fourier-Jacobi expansion of Kudla lift. (Japanese)
Pollack, David *see* **Lansky, Joshua M.**, **2003a:11051**
Sugano, Takashi *see* **Murase, Atsushi**, **2003f:11065**

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Beineke, Jennifer E. (*with* Bump, Daniel) Hidden symmetries for a renormalized integral of Eisenstein series. (English summary) **2003f:11055**
Bump, Daniel *see* **Beineke, Jennifer E.**, **2003f:11055**
Kisbye, N. P. The integral kernel in the Kuznetsov type sum formula for $SU(n+1, 1)$. (English summary) **2003g:22011**
Soulé, Christophe On zeroes of automorphic L-functions. **2003c:11103**
Stade, Eric Mellin transforms of $GL(n, \mathbb{R})$ Whittaker functions. (English summary) **2003a:22010**
Vaccaro, M. Alessandra *see* **Bartolone, Claudio G.**, **2003k:14059**
Yamauchi, Atsuo Galois actions on nearly holomorphic automorphic forms on unitary groups. (Japanese)

11F60 Hecke-Petersson operators, differential operators (several variables)

Andrianov, Anatoliĭ N. On diagonalization of singular Frobenius operators on Siegel modular forms. (English summary) **2003m:11073**
Hafner, James Lee (*with* Walling, Lynne H.) Explicit action of Hecke operators on Siegel modular forms. (English summary) **2003a:11052**
Lee, Min Ho[1] Casimir operators on pseudodifferential operators of several variables. (English summary) **2003h:11054**
Okada, Kaoru Hecke eigenvalues for real quadratic fields. (English summary) **2003k:11078**
Walling, Lynne H. *see* **Hafner, James Lee**, **2003a:11052**

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Andrianov, Anatoliĭ N. On functional equations satisfied by spinor Euler products for Siegel modular forms of genus 2 with characters. (English summary) **2003b:11036**
— Theta-transforms and even zeta functions of Siegel modular forms. **2003k:11074**
Ash, Avner (*with* Doud, Darrin; Pollack, David) Galois representations with conjectural connections to arithmetic cohomology. (English summary) **2003g:11055**
— Smith theory and Hecke operators. (English summary) **2003k:11088**
Barbu, Adrian On a conjecture of Ash. (English summary) **2003f:11074**

Braverman, Alexander (*with* Gaitsgory, D.) Geometric Eisenstein series. **2003k:11109**
Choie, Youngju (*with* Eholzer, Wolfgang) Jacobi forms and generalized RC-algebras. (English summary) **2003d:11072**
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Eholzer, Wolfgang *see* **Choie, Youngju, 2003d:11072**
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Hida, Haruzo Control theorems of coherent sheaves on Shimura varieties of PEL type. (English summary) **2003m:11086**
Kim, Haesuk Differential operators on Hermitian Jacobi forms. (English summary) **2003g:11047**
Lansky, Joshua M. (*with* Pollack, David) Hecke algebras and automorphic forms. (English summary) **2003a:11051**
Oh, Hee Harmonic analysis and Hecke operators. (English summary) **2003f:11069**
Pollack, David *see* **Lansky, Joshua M., 2003a:11051** *and* **Ash, Avner et al., 2003g:11055**
Poor, Cris (*with* Yuen, David S.) Restriction of Siegel modular forms to modular curves. (English summary) **2003g:11045**
Terracini, Lea Some properties of quaternionic Hecke algebras. (Italian. English and Italian summaries) **2003h:11045**
Walling, Lynne H. *see* **Hafner, James Lee, 2003k:11075**
Yuen, David S. *see* **Poor, Cris, 2003g:11045**

11F66 Dirichlet series and functional equations in connection with modular forms

Deitmar, Anton A Polya-Hilbert operator for automorphic L-functions. **2003h:11055**
Diaconu, A. (*with* Perelli, Alberto; Zaharescu, Alexandru) A note on GL_2 converse theorems. (English and French summaries) **2003f:11066**
Duke, W. (*with* Friedlander, John B.; Iwaniec, Henryk) Bounds for automorphic L-functions. III. **2003c:11043**
Fomenko, O. M. Symmetric squares of Hecke L-functions and Fourier coefficients of parabolic forms. (Russian. Russian summary) **2003j:11050**
Fourquaux, Lionel Produits de Petersson de formes modulaires associées aux valeurs de fonctions L. (English and French summaries) [Petersson products of modular forms associated with the values of L-functions] **2003g:11049**
Friedlander, John B. *see* **Duke, W. et al., 2003c:11043**
Goldfeld, Dorian (*with* Zhang, Shou-Wu) The holomorphic kernel of the Rankin-Selberg convolution [MR 2002d:11050]. (*see* **2003b:00030**)
Harcos, Gergely Uniform approximate functional equation for principal L-functions. **2003d:11074**
Ichihara, Yumiko Zero-free region for Rankin-Selberg L-functions—on the Rankin-Tatuzawa theorem. (Japanese)
Iwaniec, Henryk *see* **Duke, W. et al., 2003c:11043**
Kohnen, Winfried (*with* Sengupta, Jyoti) On the average of central values of symmetric square L-functions in weight aspect. (English summary) **2003g:11050**
Kozima, Noritomo Standard L-functions attached to alternating tensor valued Siegel modular forms. **2003a:11053**
Lau, Yuk Kam Non-vanishing of symmetric square L-functions. (English summary) **2003e:11053**
Laurinčikas, Antanas On value-distribution of zeta-functions associated with certain cusp forms. (English and Lithuanian summaries) **2003k:11079**
— (*with* Matsumoto, Kohji) The joint universality of zeta-functions attached to certain cusp forms. (English and Lithuanian summaries) **2003j:11051**
— (*with* Matsumoto, Kohji; Steuding, Jörn) The universality of L-functions associated with newforms. (Russian. Russian summary) **2003k:11080**
Matsumoto, Kohji *see* **Laurinčikas, Antanas et al., 2003j:11051** *and* **2003k:11080**
Michel, Philippe Gabriel (*with* Vanderkam, J.) Simultaneous nonvanishing of twists of automorphic L-functions. (English summary) **2003g:11051**
Miller, Stephen D. The highest lowest zero and other applications of positivity. (English summary) **2003b:11047**
Murakawa, Kenji Relations between symmetric power L-functions and spinor L-functions attached to Ikeda lifts. (English summary) **2003c:11044**
Perelli, Alberto *see* **Diaconu, A. et al., 2003f:11066**
Raghuram, A. Nonvanishing of certain Rankin-Selberg L-functions. (English and French summaries) **2003f:11067**
Sengupta, Jyoti *see* **Kohnen, Winfried, 2003g:11050**
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Vanderkam, J. *see* **Michel, Philippe Gabriel, 2003g:11051**
Vasudevan, T. C. Modular forms and functional equations. (English summary) **2003i:11059**
Zaharescu, Alexandru *see* **Diaconu, A. et al., 2003f:11066**
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Andrianov, Anatolii N. On functional equations satisfied by spinor Euler products for Siegel modular forms of genus 2 with characters. (English summary) **2003b:11036**
— Theta-transforms and even zeta functions of Siegel modular forms. **2003k:11074**
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11F67 Special values of automorphic L-series, periods of modular forms, cohomology, modular symbols

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11F72 Spectral theory; Selberg trace formula

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11F75 Cohomology of arithmetic groups

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11F80 Galois representations

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Saito, Takeshi[1] Galois representations in arithmetic geometry. (Japanese. Japanese summary) **2003a:11063**
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11F85 p-adic theory, local fields [see also 14G20, 22E50]

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Delbourgo, Daniel $\mathscr{L}$-invariants arising from conjugate measures of $\mathrm{Sym}^2 E$. (English summary) **2003c:11143**
(Dickinson, Mark Edward Tristan) *see* **Gouvêa, Fernando Q., 2003a:11061**
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11Gxx Arithmetic algebraic geometry (Diophantine geometry) [see also 11Dxx, 14Gxx, 14Kxx]

11G05 Elliptic curves over global fields [see also 14H52]

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Brown, Ezra (*with* Myers, Bruce T.) Elliptic curves from Mordell to Diophantus and back. **2003d:11080**
Chen, Imin Surjectivity of mod l representations attached to elliptic curves and congruence primes. (English summary) **2003i:11067**
Cojocaru, Alina Carmen Cyclicity of CM elliptic curves modulo p. (English summary) **2003m:11079**
Coogan, Gwynneth G. H. (*with* Jiménez Urroz, Jorge) Mordell-Weil ranks of quadratic twists of pairs of elliptic curves. (English summary) **2003i:11068**
Cremona, John E. On the computation of Mordell-Weil and 2-Selmer groups of elliptic curves. **2003h:11060**
— *see also* **Stoll, Michael, 2003j:11062**
Delaunay, Christophe Heuristics on Tate-Shafarevitch groups of elliptic curves defined over $\mathbb{Q}$. (English summary) **2003a:11065**
DeLong, Matt A formula for the Selmer group of a rational three-isogeny. **2003i:11069**
Dujella, Andrej An example of elliptic curve over **Q** with rank equal to 15. (English summary) **2003h:11061**
Fisher, Tom A. The Cassels-Tate pairing and the Platonic solids. (English summary) **2003k:11094**
Fujiwara, Masahiko Some properties of θ-congruent numbers. (English summary) **2003c:11054**
García-Selfa, Irene (*with* Olalla-Acosta, Miguel Ángel; Tornero, José M.) Computing the rational torsion of an elliptic curve using Tate normal form. (English summary) **2003h:11062**
Gonzàlez Rovira, Josep Isogenies of polyquadratic $\mathbb{Q}$-curves to their Galois conjugates. (English summary) **2003c:11055**
Goto, Takeshi Calculation of Selmer groups of elliptic curves with rational 2-torsions and θ-congruent number problem. **2003a:11066**
— A note on the Selmer group of the elliptic curve $y^2 = x^3 + Dx$. (English summary) **2003d:11081**
Grant, David R. *see* **Boxall, John, 2003k:11093**
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Kida, Masanari Computing elliptic curves having good reduction everywhere over quadratic fields. **2003c:11056**
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Kihel, Omar Extensions diédrales et courbes elliptiques. [Dihedral extensions and elliptic curves] **2003f:11077**
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Kulesz, Leopoldo (*with* Stahlke, Colin) Elliptic curves of high rank with nontrivial torsion group over $\mathbb{Q}$. (English summary) **2003g:11057**
Kurihara, Masato On the Tate Shafarevich groups over cyclotomic fields of an elliptic curve with supersingular reduction. I. **2003f:11078**
Lecacheux, Odile Rang de courbes elliptiques liées à certaines extensions cycliques de degré 4 et 6. [Rank of elliptic curves associated with some cyclic extensions of degrees 4 and 6] **2003g:11058**
Lee, Jung-Jo Ranks of elliptic curves. **2003i:11070**
Maenishi, Masayuki On the rank of elliptic curves $y^2 = x^3 - pqx$. (English summary) **2003c:11057**
Mazur, Barry (*with* Rubin, Karl) Elliptic curves and class field theory. (English summary) **2003k:11095**
Merel, Loïc (*with* Stein, William A.) The field generated by the points of small prime order on an elliptic curve. **2003d:11082**
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Ochi, Yoshihiro (*with* Venjakob, Otmar) On the structure of Selmer groups over p-adic Lie extensions. (English summary) **2003m:11082**
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Wang, Fu Zheng The Selmer groups of elliptic curves. (English summary) **2003m:11083**
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Bars, Francesc On the Tamagawa number conjecture for CM elliptic curves defined over $\mathbb{Q}$. (English summary) **2003h:11071**
Bertolin, Cristiana Périodes de 1-motifs et transcendance. (English summary) [Periods of 1-motives and transcendence] **2003i:11104**
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Takahashi, Shuzo Groups of connected components and congruence ideals associated with elliptic curves. **2003f:11063**
Thakur, Dinesh S. Elliptic curves in function field arithmetic. (English summary) **2003h:11064**
Top, Jaap *see* **Auer, Roland, 2003g:11068**
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Zaldívar, Felipe The Fermat conjecture [Fermat's Last Theorem]. (Spanish) **2003e:11033**
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11G07 Elliptic curves over local fields [see also 14G20, 14H52]

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Kodama, Tetsuo *see* **Washio, Tadashi, 2003d:11083**
Kraus, Alain *see* **Cali, Élie, 2003f:11082**
Naito, Hirotada Local fields generated by 3-division points of elliptic curves. (English summary) **2003i:11072**
Rakhimov, I. S. On the local field of definition of p-order points of elliptic curves. (Russian. English and Uzbek summaries) **2003j:11064**
Washio, Tadashi (*with* Kodama, Tetsuo) Note on a certain supersingular elliptic curve. (English summary) **2003d:11083**

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Cremona, John E. *see* **Stoll, Michael, 2003j:11062**
Momose, Fumiyuki (*with* Shimura, Mahoro) Lifting of supersingular points on $X_0(p^r)$ and lower bound of ramification index. (English summary) **2003d:11086**
Ochi, Yoshihiro (*with* Venjakob, Otmar) On the structure of Selmer groups over p-adic Lie extensions. (English summary) **2003m:11082**
Shimura, Mahoro *see* **Momose, Fumiyuki, 2003d:11086**
Stoll, Michael (*with* Cremona, John E.) Minimal models for 2-coverings of elliptic curves. (English summary) **2003j:11062**
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11G09 Drinfel′d modules; higher-dimensional motives, etc. [see also 14L05]

Bosser, Vincent Hauteurs normalisées des sous-variétés de produits de modules de Drinfeld. (English summary) [Normalized heights of the subvarieties of products of Drinfel′d modules] **2003g:11062**
Elkies, Noam D. Explicit towers of Drinfeld modular curves. (English summary) **2003e:11061**
Gardeyn, Francis Une borne pour l'action de l'inertie sauvage sur la torsion d'un module de Drinfeld. (French summary) [A bound for the action of wild inertia on the torsion of a Drinfeld module] **2003i:11073**
— A Galois criterion for good reduction of τ-sheaves. (English summary) **2003i:11074**
Laumon, Gérard La correspondance de Langlands sur les corps de fonctions (d'après Laurent Lafforgue). [The Langlands correspondence on function fields (following Laurent Lafforgue)] **2003b:11052**
Li, Anly On the torsion points of Drinfeld modules in abelian extensions. (English summary) **2003m:11084**
Scanlon, Thomas Warren Diophantine geometry of the torsion of a Drinfeld module. (English summary) **2003h:11063**
Schweizer, Andreas Biellipticic Drinfeld modular curves. (English summary) **2003e:11062**
Thakur, Dinesh S. Elliptic curves in function field arithmetic. (English summary) **2003h:11064**
Yao, Wei-Chen (*with* Yu, Jing) On primitive roots for Carlitz modules. (English summary) **2003m:11085**
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Bertolin, Cristiana The Mumford-Tate group of 1-motives. (English and French summaries) **2003f:14052**
Böckle, Gebhard Global L-functions over function fields. **2003e:11052**
Bosser, Vincent Congruence properties of the coefficients of the Drinfeld modular invariant. (English summary) **2003i:11058**
Brownawell, W. Dale (*with* Papanikolas, Matthew A.) Linear independence of gamma values in positive characteristic. (English summary) **2003g:11080**
Cornelissen, Gunther The 2-primary class group of certain hyperelliptic curves. (English summary) **2003b:11055**
— (*with* Kato, Fumiharu; Kontogeorgis, Aristides) Discontinuous groups in positive characteristic and automorphisms of Mumford curves. **2003d:14032**
David, Sinnou (*with* Denis, Laurent) Périodes de modules de "l'indépendance quadratique en rang II". (English and French summaries) [Periods of modules of "quadratic independence in rank II"] **2003i:11103**
Denis, Laurent *see* **David, Sinnou, 2003i:11103**
Hamahata, Yoshinori On a product expansion for the Drinfeld discriminant function. (English summary) **2003h:11050**
Kato, Fumiharu *see* **Cornelissen, Gunther et al., 2003d:14032**
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Li, Wen-Ching Winnie (*with* Maharaj, Hiren) Coverings of curves with asymptotically many rational points. (English summary) **2003h:11066**
Longhi, Ignazio Non-Archimedean integration and elliptic curves over function fields. (English summary) **2003h:11051**
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Rosson, Holly J. Theta series of quaternion algebras over function fields. (English summary) **2003f:11176**
Xu, Fei[1] (*with* Zhao, Jianqiang) Euler systems in global function fields. (English summary) **2003a:11148**
Yoshida, Hiroyuki[1] Motives and Siegel modular forms. (English summary) **2003d:11071**
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11G10 Abelian varieties of dimension > 1 [see also 14Kxx]

Ellenberg, Jordan S. Endomorphism algebras of Jacobians. (English summary) **2003c:11061**

— Finite flatness of torsion subschemes of Hilbert-Blumenthal abelian varieties. (English summary) **2003c:11062**
Harashita, Shushi Geometrical structure and number theory on supersingular logic with endomorphism structure. (English summary)
Howe, Everett W. (*with* Zhu, Hui June) On the existence of absolutely simple abelian varieties of a given dimension over an arbitrary field. (English summary) **2003g:11063**
Papanikolas, Matthew A. Universal norms on abelian varieties over global function fields. (English summary) **2003f:11083**
Polishchuk, Alexander Analogue of Weil representation for abelian schemes. (English summary) **2003k:11097**
Wintenberger, Jean-Pierre Démonstration d'une conjecture de Lang dans des cas particuliers. (English summary) [Proof of a conjecture by Lang in some particular cases] **2003i:11075**
Zarkhin, Yu. G. Cyclic covers of the projective line, their Jacobians and endomorphisms. **2003a:11068**
— On the endomorphism rings of some Jacobians in finite characteristic. (Russian. Russian summary) **2003f:11084**
— Very simple 2-adic representations and hyperelliptic Jacobians. (English summary) **2003k:11098**
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11G15 Complex multiplication and moduli of abelian varieties [see also 14K22]

Aoki, Noboru Hodge cycles on CM abelian varieties of Fermat type. **2003f:11085**
Breuer, Florian Distinguished li\'tings and the André-Oort conjecture. (English summary) **2003i:11076**
Jeong, Sumi *see* **Park, Hwasin et al., 2003f:11086**
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Rakhimov, I. S. On the field of definition of p-order points of elliptic curves with complex multiplication. (Russian. English and Uzbek summaries) **2003g:11064**
Wintenberger, Jean-Pierre Une extension de la théorie de la multiplication complexe. (English summary) [An extension of the theory of complex multiplication] **2003i:11077**

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Bannai, Kenichi On the p-adic realization of elliptic polylogarithms for CM-elliptic curves. (English summary) **2003e:11070**
Bars, Francesc On the Tamagawa number conjecture for CM elliptic curves defined over $\mathbb{Q}$. (English summary) **2003h:11071**
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Bessassi, Sofiène Bounds for the degrees of CM-fields of class number one. **2003m:11183**
Cojocaru, Alina Carmen Cyclicity of CM elliptic curves modulo p. (English summary) **2003m:11079**
Itoh, Tsuyoshi A computation of minimal polynomials of special values of Siegel modular functions. (English summary) **2003k:11076**
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Tamagawa, Akio Ramification of torsion points on curves with ordinary semistable Jacobian varieties. (English summary) **2003c:11066**
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11G16 Elliptic and modular units [see also 11R27]

Bettner, Stefan (*with* Schertz, Reinhard) Lower powers of elliptic units. (English and French summaries) **2003e:11063**
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11G18 Arithmetic aspects of modular and Shimura varieties [see also 14G35]

Ahlgren, Scott (*with* Papanikolas, Matthew A.) Higher Weierstrass points on $X_0(p)$. (English summary) **2003j:11065**
Arenas, Angela (*with* Bayer, P.) Complex multiplication points on modular curves. (English and Spanish summaries) **2003b:11053**
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Borisov, Lev A. (*with* Gunnells, Paul E.; Popescu, Sorin) Elliptic functions and equations of modular curves. (English summary) **2003b:11054**
Conrad, Brian (*with* Stein, William A.) Component groups of purely toric quotients. (English summary) **2003f:11087**
Cornut, Christophe Non-trivialité des points de Heegner. (English and French summaries) [Nontriviality of Heegner points] **2003d:11084**
Fargues, Laurent Une suite spectrale de Hochschild-Serre pour l'uniformisation de Rapoport-Zink. (English and French summaries) [A Hochschild-Serre spectral sequence for the Rapoport-Zink uniformization] **2003c:11063**
Galbraith, Steven D. Rational points on $X_0^+(N)$ and quadratic $\mathbb{Q}$-curves. (English and French summaries) **2003e:11064**
Goldberger, A. (*with* de Shalit, Ehud) Tamely ramified Hida theory. (English and French summaries) **2003g:11065**
González-Jiménez, Enrique (*with* Gonzàlez Rovira, Josep) Modular curves of genus 2. (English summary) **2003i:11078**
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Haines, Thomas J. On connected components of Shimura varieties. (English summary) **2003c:11064**
— (*with* Ngô Bảo Châu) Nearby cycles for local models of some Shimura varieties. (English summary) **2003h:11065**
Harris, Michael Local Langlands correspondences and vanishing cycles on Shimura varieties. (English summary) **2003g:11066**
— (*with* Taylor, Richard L.) Regular models of certain Shimura varieties. **2003d:11085**
Hida, Haruzo Control theorems of coherent sheaves on Shimura varieties of PEL type. (English summary) **2003m:11086**
Ishida, Nobuhiko (*with* Ishii, Noburo) Generators and defining equation of the modular function field of the group $\Gamma_1(N)$. **2003a:11069**
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Kamienny, S. On the automorphism groups of some modular curves. (English summary) **2003i:11079**
Kudla, Stephen S. Derivatives of Eisenstein series and generating functions for arithmetic cycles. **2003a:11070**
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Reimann, Harry Reduction of Shimura varieties at parahoric levels. (English summary) **2003f:11088a**
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Ritzenthaler, Christophe Automorphismes des courbes modulaires $X(n)$ en caractéristique p. (English summary) [Automorphisms of the modular curves $X(n)$ of characteristic p] **2003g:11067**
Rotger, Victor On the group of automorphisms of Shimura curves and applications. (English summary) **2003c:11065**
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Siksek, Samir (*with* Skorobogatov, A. N.) On a Shimura curve that is a counterexample to the Hasse principle. (English summary) **2003k:11100**
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Bertolini, Massimo (*with* Darmon, Henri; Iovita, Adrian; Spieß, Michael) Teitelbaum's exceptional zero conjecture in the anticyclotomic setting. (English summary) **2003c:11071**
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— On the rank of Picard groups of modular varieties attached to orthogonal groups. (English summary) **2003h:11053**
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Haines, Thomas J. (*with* Ngô Bảo Châu) Alcoves associated to special fibers of local models. (English summary) **2003j:14027**
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Stein, William A. There are genus one curves over $\mathbb{Q}$ of every odd index. (English summary) **2003c:11059**
Takahashi, Shuzo Groups of connected components and congruence ideals associated with elliptic curves. **2003f:11063**
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Ullmo, Emmanuel Théorie ergodique et géométrie arithmétique. (English summary) [Ergodic theory and arithmetic geometry] **2003k:14025**
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11G20 Curves over finite and local fields [see also 14H25]

Auer, Roland (*with* Top, Jaap) Legendre elliptic curves over finite fields. (English summary) **2003g:11068**
Chen, Gong-Liang *see* **Zhou, Chao-yong, 2003m:11091**
Chen, Yen-Mei J. (*with* Yu, Jing) On a density problem for elliptic curves over finite fields. (English summary) **2003a:11071**
Cobeli, Cristian (*with* Zaharescu, Alexandru) On the distribution of the $\mathbf{F}_p$-points on an affine curve in r dimensions. **2003j:11066**
— (*with* Zaharescu, Alexandru) A question on the distribution of points on a curve over a finite field. (English summary) **2003m:11088**
Cornelissen, Gunther The 2-primary class group of certain hyperelliptic curves. (English summary) **2003b:11055**
Coulter, Robert S. The number of rational points of a class of Artin-Schreier curves. (English summary) **2003i:11080**
Ding, Cunsheng (*with* Kohel, David R.; Ling, San) Counting the number of points on affine diagonal curves. (English summary) **2003i:11081**
Dummit, David S. CM elliptic curves and bicolorings of Steiner triple systems. (English summary) **2003a:11072**
Finotti, Luis R. A. Degrees of the elliptic Teichmüller lift. (English summary) **2003m:11089**
Garcia, Arnaldo Curves over finite fields attaining the Hasse-Weil upper bound. (English summary) **2003e:11065**
van der Geer, Gerard (*with* van der Vlugt, Marcel) An asymptotically good tower of curves over the field with eight elements. (English summary) **2003c:11067**
Guneri, Cem A bound on the number of rational points of certain Artin-Schreier families. (English summary) **2003i:11082**
de Jong, A. J. A conjecture on arithmetic fundamental groups. (English summary) **2003a:11073**
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Kohel, David R. *see* **Ding, Cunsheng et al., 2003i:11081**
Kresch, Andrew (*with* Wetherell, Joseph L.; Zieve, Michael E.) Curves of every genus with many points. I. Abelian and toric families. (English summary) **2003i:11084**
Li, Wen-Ching Winnie (*with* Maharaj, Hiren) Coverings of curves with asymptotically many rational points. (English summary) **2003h:11066**
Ling, San *see* **Ding, Cunsheng et al., 2003i:11081**
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Miret, J. (*with* Moreno, Ramiro; Sadornil, D.; Tena Ayuso, Juan Gabriel; Valls Marsal, Magda) Isomorphism classes of elliptic curves with even order over a finite field. (English summary) **2003e:11066**
Miura, Shinji *see* **Kawakita, Motoko Qiu, 2003i:11083**
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Top, Jaap *see* **Auer, Roland, 2003g:11068**
Vâjâitu, Marian (*with* Zaharescu, Alexandru) Distribution of values of rational maps on the $\mathbf{F}_p$-points on an affine curve. (English summary) **2003f:11089**
Valls Marsal, Magda *see* **Miret, J. et al., 2003e:11066**
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Wang, Zi Tong *see* **Yoshioka, Yoshio, 2003m:11090**
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Yoshioka, Yoshio (*with* Wang, Zi Tong) The elliptic curve group and its characteristics. (Japanese. English and Japanese summaries) **2003m:11090**
Yu, Jing *see* **Chen, Yen-Mei J., 2003a:11071**
Zaharescu, Alexandru *see* **Vâjâitu, Marian, 2003f:11089**; **Cobeli, Cristian, 2003j:11066** *and* **2003m:11088**
Zhou, Chao-yong (*with* Chen, Gong-Liang) A classification of elliptic curves over finite field and some properties. (English and Chinese summaries) **2003m:11091**
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Couveignes, Jean-Marc Algebraic groups and discrete logarithm. (English summary) **2003a:11160**
Deolalikar, Vinay Extensions of algebraic function fields with complete splitting of all rational places. **2003f:14019**
Elkies, Noam D. Explicit towers of Drinfeld modular curves. (English summary) **2003e:11061**
El Mahassni, Edwin (*with* Shparlinski, Igor E.) On the uniformity of distribution of congruential generators over elliptic curves. (English summary) **2003e:94055**
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Gabber, Ofer On space filling curves and Albanese varieties. **2003g:14034**
Gaudry, Pierrick (*with* Gürel, Nicolas) An extension of Kedlaya's point-counting algorithm to superelliptic curves. (English summary) **2003h:11159**
Gebhardt, Max Constructing function fields with many rational places via the Carlitz module. (English summary) **2003e:11125**
van der Geer, Gerard Curves over finite fields and codes. (English summary) **2003g:14036**
Glazunov, N. M. Moduli spaces, equidistribution, bounds and rational points of algebraic curves. (Russian. English and Ukrainian summaries) **2003a:11101**
Gong, Guang (*with* Lam, Charles C. Y.) Linear recursive sequences over elliptic curves. (English summary) **2003g:94026**
Gürel, Nicolas *see* **Gaudry, Pierrick, 2003h:11159**
Henningsen, Maike Computing the endomorphism type of ordinary elliptic curves over finite fields with KANT V4. (English summary) (*see* **2003d:00014**)
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Kim, Daeyeoul *see* **Park, Hwasin et al., 2003k:14022**
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Kohel, David R. (*with* Shparlinski, Igor E.) On exponential sums and group generators for elliptic curves over finite fields. (English summary) **2003c:11094**
— Rational groups of elliptic curves suitable for cryptography. (English summary) **2003j:14030**
Lam, Charles C. Y. *see* **Gong, Guang, 2003g:94026**
Lauder, Alan G. B. (*with* Wan, Daqing) Computing zeta functions of Artin-Schreier curves over finite fields. (English summary) **2003g:11140**
Lauter, Kristin The maximum or minimum number of rational points on genus three curves over finite fields. (English summary) **2003i:14025**
Lee, Eun-Hee *see* **Park, Hwasin et al., 2003k:14022**

Lenstra, Hendrik W., Jr. (*with* Pila, Jonathan; Pomerance, Carl) A hyperelliptic smoothness test. II. **2003f:11190**
Menezes, Alfred J. *see* **Hernández Encinas, L. et al., 2003f:14020**
Mochizuki, Shinichi The intrinsic Hodge theory of p-adic hyperbolic curves. **2003a:14035**
Mortenson, Eric Supercongruences between truncated ${}_2F_1$ hypergeometric functions and their Gaussian analogs. (English summary) **2003i:11119**
Muñoz Masqué, Jaime *see* **Hernández Encinas, L. et al., 2003f:14020**
Narasimhan, Anuradha Zeta functions for curves defined over finite fields. **2003f:14018**
Park, Hwasin (*with* Kim, Daeyeoul; Lee, Eun-Hee) The number of points on elliptic curves $E: y^2 = x^3 + cx$ over $\mathbb{F}_p$ mod 8. (English summary) **2003k:14022**
Pila, Jonathan *see* **Lenstra, Hendrik W., Jr. et al., 2003f:11190**
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Preneel, Bart *see* **Vercauteren, Frederik et al., 2003c:11157**
Rosenberger, Gerhard (*with* Wang, Xueli) Some properties of reduced modular polynomials. (English summary) **2003j:11042**
Savaş, Erkay (*with* Schmidt, Thomas A.; Koç, Çetin K.) Generating elliptic curves of prime order. (English summary) **2003m:14037**
Schmidt, Thomas A. *see* **Savaş, Erkay et al., 2003m:14037**
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Stichtenoth, Henning Explicit constructions of towers of function fields with many rational places. (English summary) **2003d:11173**
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Vercauteren, Frederik (*with* Preneel, Bart; Vandewalle, Joos) A memory efficient version of Satoh's algorithm. (English summary) **2003c:11157**
Wan, Daqing *see* **Lauder, Alan G. B., 2003g:11140**
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Weng, Annegret On group orders of rational points of elliptic curves. (English summary) **2003i:11071**
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11G25 Varieties over finite and local fields [see also 14G15, 14G20]

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Ballico, Edoardo Geometry of cubic and quartic hypersurfaces over finite fields. (English summary) **2003h:14036**
Besser, Amnon Coleman integration using the Tannakian formalism. (English summary) **2003d:11176**
Denef, Jan (*with* Sperber, S.) Exponential sums mod p^n and Newton polyhedra. (English summary) **2003b:11080**
Gabber, Ofer On space filling curves and Albanese varieties. **2003g:14034**
van Geemen, B. *see* **Hulek, Klaus et al., 2003b:11058**
Guneri, Cem A bound on the number of rational points of certain Artin-Schreier families. (English summary) **2003i:11082**
Howe, Everett W. (*with* Zhu, Hui June) On the existence of absolutely simple abelian varieties of a given dimension over an arbitrary field. (English summary) **2003g:11063**
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Hulek, Klaus (*with* Spandaw, J.; van Geemen, B.; van Straten, Duco) The modularity of the Barth-Nieto quintic and its relatives. (English summary) **2003b:11058**
de Jong, A. J. Counting elliptic surfaces over finite fields. (English summary) **2003m:11080**
Katz, Nicholas M. ★ Twisted L-functions and monodromy. **2003i:11087**
Kisin, Mark (*with* Lehrer, G. I.) Equivariant Poincaré polynomials and counting points over finite fields. (English summary) **2003b:14023**
Kollár, János Unirationality of cubic hypersurfaces. (English summary) **2003m:14082**
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Maisner, Daniel (*with* Nart, Enric) Abelian surfaces over finite fields as Jacobians. (English summary) **2003k:14057**
Nart, Enric *see* **Maisner, Daniel, 2003k:14057**
Perret, Marc On the number of points of some varieties over finite fields. (English summary) **2003m:14036**
Schimmrigk, Rolf Arithmetic of Calabi-Yau varieties and rational conformal field theory. (English summary) **2003j:11069**
Spandaw, J. *see* **Hulek, Klaus et al., 2003b:11058**
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11H46 Products of linear forms

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11H50 Minima of forms

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11H56 Automorphism groups of lattices

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11H71 Relations with coding theory

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11H99 None of the above, but in this section

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11Jxx Diophantine approximation, transcendental number theory [see also 11K60]

11J04 Homogeneous approximation to one number

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11J06 Markov and Lagrange spectra and generalizations

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11J13 Simultaneous homogeneous approximation, linear forms

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11J17 Approximation by numbers from a fixed field

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Viola, Carlo *see* **Amoroso, Francesco, 2003c:11081**

11J20 Inhomogeneous linear forms

Komatsu, Takao[2] On inhomogeneous Diophantine approximation and the Borweins' algorithm. II. (English summary) **2003m:11105**
Pinner, Christopher G. More on inhomogeneous Diophantine approximation. (English and French summaries) **2003b:11066**

11J25 Diophantine inequalities [see also 11D75]

Boca, Florin-Petre (*with* Vâjâitu, Marian; Zaharescu, Alexandru) Integer points close to algebraic curves. (English summary) **2003b:11067**
Corvaja, Pietro (*with* Zannier, Umberto) Some new applications of the subspace theorem. (English summary) **2003e:11076**
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— (*with* Schlickewei, Hans Peter) A quantitative version of the absolute subspace theorem. **2003f:11099**
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Thunder, Jeffrey Lin Inequalities for decomposable forms of degree $n+1$ in n variables. (English summary) **2003g:11032**
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11J54 Small fractional parts of polynomials and generalizations

Baker, R. C. Small fractional parts of quadratic forms. **2003k:11118**

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Boca, Florin-Petre (*with* Zaharescu, Alexandru) On the pair correlation for fractional parts of vector sequences. (English summary) **2003d:11103**
— (*with* Vâjâitu, Marian; Zaharescu, Alexandru) Integer points close to algebraic curves. (English summary) **2003b:11067**
Vâjâitu, Marian *see* **Boca, Florin-Petre et al., 2003b:11067**
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11J61 Approximation in non-Archimedean valuations

Fuchs, Michael On metric Diophantine approximation in the field of formal Laurent series. (English summary) **2003d:11100**
Lasjaunias, A. (*with* Ruch, J.-J.) Flat power series over a finite field. (English summary) **2003h:11076**
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11J68 Approximation to algebraic numbers

Cohen, Paula B. (*with* van der Poorten, Alfred J.) Ideal construction and irrationality measures of roots of algebraic numbers. (English summary) **2003m:11108**
Evertse, Jan-Hendrik On resultant inequalities. **2003i:11096**
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Kalosha, N. I. On the approximation properties of algebraic numbers of the third degree. (Russian. English and Russian summaries) **2003m:11114**
Teulié, Olivier Approximations simultanées de nombres algébriques de $\mathbf{Q}_p$ par des rationnels. (English summary) [Simultaneous approximations of algebraic numbers of $\mathbf{Q}_p$ by rational numbers] **2003j:11075**
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Tucker, Thomas J. Irreducibility, Brill-Noether loci and Vojta's inequality. (English summary) **2003f:11091**

11J70 Continued fractions and generalizations [see also 11A55, 11K50]

Bibiloni, Lluís (*with* Viader, Pelegrí; Paradís, Jaume) On the concept of optimality interval. (English summary) **2003f:11100**
Hardy, Isabelle (*with* Hellegouarch, Yves; Paysant-Le Roux, Roger) Fractions continues normales dans un corps de fonctions hyperelliptiques. [Normal continued fractions in a field of hyperelliptic functions] **2003d:11101**
Hellegouarch, Yves *see* **Hardy, Isabelle et al., 2003d:11101**
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Mkaouar, Mohamed Continued fractions of transcendental numbers. (English summary) **2003k:11119**
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Palmore, Julian Rates of convergence for continued fractions of irrational numbers. (English summary) **2003a:11085**
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Fuchs, Michael On metric Diophantine approximation in the field of formal Laurent series. (English summary) **2003d:11100**
Iosifescu, Marius (*with* Kraaikamp, Cor) On Denjoy's canonical continued fraction expansion. **2003m:11123**
Komatsu, Takao[2] On inhomogeneous Diophantine approximation and the Borweins' algorithm. II. (English summary) **2003m:11105**
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Kraaikamp, Cor *see* **Iosifescu, Marius, 2003m:11123**
Lasjaunias, A. (*with* Ruch, J.-J.) Flat power series over a finite field. (English summary) **2003h:11076**
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Ruch, J.-J. *see* **Lasjaunias, A., 2003h:11076**
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Vulakh, L. Ya. Continued fractions associated with $SL_3(\mathbf{Z})$ and units in complex cubic fields. (English summary) **2003m:11182**

11J71 Distribution modulo one [see also 11K06]

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Boca, Florin-Petre (*with* Zaharescu, Alexandru) On the pair correlation for fractional parts of vector sequences. (English summary) **2003d:11103**
Deshouillers, Jean-Marc *see* **Biró, András et al., 2003d:11102**
Hensley, Doug The geometry of badly approximable vectors. (English summary) **2003d:11104**
Sós, Vera T. *see* **Biró, András et al., 2003d:11102**
Zaharescu, Alexandru *see* **Boca, Florin-Petre, 2003d:11103**

Items with secondary classifications in 11J71

Baxa, C. (*with* Schoissengeier, Johannes) Calculation of improper integrals using $(n\alpha)$-sequences. (English summary) **2003h:11084**
Bugeaud, Yann Nombres de Liouville et nombres normaux. (English and French summaries) [Liouville numbers and normal numbers] **2003e:11081**
Dubickas, Artūras Integer parts of powers of Pisot and Salem numbers. (English summary) **2003j:11129**
Schoissengeier, Johannes *see* **Baxa, C., 2003h:11084**
Vinson, Jade P. Partial sums of $\zeta(\frac{1}{2})$ modulo 1. (English summary) **2003i:11124**

11J72 Irrationality; linear independence over a field

Amou, Masaaki (*with* Katsurada, Masanori; Väänänen, Keijo) On the values of certain q-hypergeometric series. II. (English summary) **2003d:11105**
— Linear independence of the values of q-hypergeometric series. (English summary)
Ball, Keith (*with* Rivoal, Tanguy) Irrationalité d'une infinité de valeurs de la fonction zêta aux entiers impairs. [Irrationality of infinitely many values of the zeta function at odd integers] **2003a:11086**
Hančl, Jaroslav A note on a paper of Oppenheim and Šalát concerning series of Cantor type. (English summary) **2003i:11098**
Katsurada, Masanori *see* **Amou, Masaaki et al., 2003d:11105**
Matala-aho, Tapani On Diophantine approximations of the solutions of q-functional equations. (English summary) **2003e:11077**
Rivoal, Tanguy Irrationalité d'au moins un des neuf nombres $\zeta(5), \zeta(7), \ldots, \zeta(21)$. [Irrationality of at least one of the nine numbers $\zeta(5), \zeta(7), \ldots, \zeta(21)$] **2003b:11068**
— *see also* **Ball, Keith, 2003a:11086**
Sato, Susumu Beukers integrals and their generalization. (Japanese)
Sorokin, V. N. Cyclic graphs and Apéry's theorem. (Russian. Russian summary) **2003f:11101**
Sun, Mao Rong Irrationality of certain Lucas infinite series. (Chinese. English and Chinese summaries)
Väänänen, Keijo *see* **Amou, Masaaki et al., 2003d:11105**
Zlobin, S. A. Integrals that can be represented as linear forms of generalized polylogarithms. (Russian) **2003h:11078**

Items with secondary classifications in 11J72

Amoroso, Francesco (*with* Viola, Carlo) Approximation measures for logarithms of algebraic numbers. (English summary) **2003c:11081**
Amou, Masaaki (*with* Väänänen, Keijo) Arithmetic properties of solutions of certain functional equations in several variables. (English summary) **2003h:11079**
Hadjicostas, Petros Some generalizations of Beukers' integrals. (English summary) **2003h:11098**
Huttner, Marc (*with* Matala-aho, Tapani) Diophantine approximations for a constant related to elliptic functions. (English summary) **2003c:11084**
Kanoko, Tomoaki Transcendence of certain reciprocal sums of linear recurrences.
Matala-aho, Tapani *see* **Huttner, Marc, 2003c:11084**
McCleary, John Trigonometries. **2003e:51027**
Srivastava, Hari M. Some recent developments on the evaluations and representations of the zeta functions. (English summary) **2003f:11122**
Väänänen, Keijo On linear independence of the values of generalized Heine series. (English summary) **2003k:11120**
— *see also* **Amou, Masaaki, 2003h:11079**
Viola, Carlo *see* **Amoroso, Francesco, 2003c:11081**
Zhu, Yao Chen Transcendence of certain trigonometric series. (English summary) **2003g:11076**

11J81 Transcendence (general theory)

Adhikari, Sukumar Das (*with* Saradha, N.; Shorey, T. N.; Tijdeman, R.) Transcendental infinite sums. (English summary) **2003c:11080**
Berthé, V. Automatic sequences and transcendence.
Duverney, Daniel (*with* Kanoko, Tomoaki; Tanaka, Taka-aki) Transcendence of certain reciprocal sums of linear recurrences. (English summary) **2003i:11099**
Gürses, Halidun Über verallgemeinerte Lückenreihen. (English summary) [On generalized lacunary power series] **2003a:11087**
— Über eine Klasse verallgemeinerter Lückenreihen mit algebraischen Koeffizienten. (English summary) [On a class of generalized lacunary power series with algebraic coefficients] **2003a:11088**
Kanoko, Tomoaki Transcendence of certain reciprocal sums of linear recurrences.
— *see also* **Duverney, Daniel et al., 2003i:11099**
Saradha, N. *see* **Adhikari, Sukumar Das et al., 2003c:11080**
Shorey, T. N. *see* **Adhikari, Sukumar Das et al., 2003c:11080**
Tanaka, Taka-aki Transcendence of the values of certain series with Hadamard's gaps. (English summary) **2003b:11069**
— *see also* **Duverney, Daniel et al., 2003i:11099**
Tijdeman, R. Some applications of Diophantine approximation. **2003j:11076**
— *see also* **Adhikari, Sukumar Das et al., 2003c:11080**
Yao, Jia-Yan Some transcendental functions over function fields with positive characteristic. (English and French summaries) **2003d:11106**
Yu, Xiu Yuan On the algebraic approximation measure of a class of functions. (Chinese. English and Chinese summaries) **2003i:11100**
Zhu, Yao Chen Transcendence of certain trigonometric series. (English summary) **2003g:11076**

Items with secondary classifications in 11J81

Corvaja, Pietro (*with* Zannier, Umberto) Some new applications of the subspace theorem. (English summary) **2003e:11076**
Girstmair, Kurt Hippocrates' lunes and transcendence. (English summary)
Gouillon, Nicolas Un lemme de zéros. (English and French summaries) [A lemma of zeros] **2003h:11081**
Mkaouar, Mohamed Continued fractions of transcendental numbers. (English summary) **2003k:11119**
Nishioka, Kumiko Algebraic independence of reciprocal sums of binary recurrences. II. (English summary) **2003c:11083**
Surroca, Andrea Sur le nombre de points algébriques où une fonction analytique transcendante prend des valeurs algébriques. (English and French summaries) [On the number of algebraic points where an analytic transcendental function takes algebraic values] **2003d:11099**
Zannier, Umberto *see* **Corvaja, Pietro, 2003e:11076**

11J82 Measures of irrationality and of transcendence

Amoroso, Francesco (*with* Viola, Carlo) Approximation measures for logarithms of algebraic numbers. (English summary) **2003c:11081**
Amou, Masaaki (*with* Väänänen, Keijo) Arithmetic properties of solutions of certain functional equations in several variables. (English summary) **2003h:11079**
Bruiltet, Sylvain D'une mesure d'approximation simultanée à une mesure d'irrationalité: le cas de $\Gamma(1/4)$ et $\Gamma(1/3)$. (French summary) [From a simultaneous approximation measure to an irrationality measure: the case of $\Gamma(1/4)$ and $\Gamma(1/3)$] **2003f:11102**
Ivankov, P. L. On simultaneous approximations that take into account the specifics of the homogeneous case. (Russian. Russian summary) **2003d:11107**
Matala-aho, Tapani (*with* Prévost, Marc) Irrationality measures for the series of reciprocals from recurrence sequences. (English summary) **2003m:11110**
Prévost, Marc *see* **Matala-aho, Tapani, 2003m:11110**
Väänänen, Keijo On linear independence of the values of generalized Heine series. (English summary) **2003k:11120**
— *see also* **Amou, Masaaki, 2003h:11079**
Viola, Carlo *see* **Amoroso, Francesco, 2003c:11081**
Wu, Qiang[5] On the linear independence measure of logarithms of rational numbers. (English summary) **2003m:11111**
Xu, Guang Shan Measure of independence for the values of F functions in $\mathbb{K}_v$. (Chinese. English and Chinese summaries) **2003c:11082**
Zudilin, V. V. On the irrationality of $\zeta_q(2)$. (Russian) **2003d:11108**
— Remarks on irrationality of q-harmonic series. (English summary) **2003f:11103**
— On the irrationality measure of the q-analogue of $\zeta(2)$. (Russian. Russian summary) **2003g:11077**

Items with secondary classifications in 11J82

Amou, Masaaki (*with* Katsurada, Masanori; Väänänen, Keijo) On the values of certain q-hypergeometric series. II. (English summary) **2003d:11105**
Bauer, Mark (*with* Bennett, Michael A.) Applications of the hypergeometric method to the generalized Ramanujan-Nagell equation. (English summary) **2003c:11029**
Bennett, Michael A. *see* **Bauer, Mark, 2003c:11029**

Cohen, Paula B. (*with* van der Poorten, Alfred J.) Ideal construction and irrationality measures of roots of algebraic numbers. (English summary) **2003m:11108**
Huttner, Marc (*with* Matala-aho, Tapani) Diophantine approximations for a constant related to elliptic functions. (English summary) **2003c:11084**
Katsurada, Masanori *see* **Amou, Masaaki et al., 2003d:11105**
Matala-aho, Tapani On Diophantine approximations of the solutions of q-functional equations. (English summary) **2003e:11077**
— *see also* **Huttner, Marc, 2003c:11084**
van der Poorten, Alfred J. *see* **Cohen, Paula B., 2003m:11108**
Väänänen, Keijo *see* **Amou, Masaaki et al., 2003d:11105**

11J83 Metric theory

Beresnevich, V. V. Distribution of rational points near a parabola. (Russian. English and Russian summaries) **2003k:11121**
— A Groshev type theorem for convergence on manifolds. (English summary) **2003d:11109**
Bernik, V. I. Upper bounds for the measure of real numbers with a given finite order of approximation. (Russian. English and Russian summaries) **2003a:11089**
Bugeaud, Yann Approximation by algebraic integers and Hausdorff dimension. (English summary) **2003d:11110**
Fuchs, Michael On a problem of W. J. LeVeque concerning metric Diophantine approximation. (English summary) **2003m:11112**
Harman, Glyn (*with* Jones, Huw) Metrical theorems on restricted Diophantine approximations to points on a curve. (English summary) **2003m:11113**
— Non-linear Diophantine approximation of complex numbers. **2003g:11078**
Jones, Huw *see* **Harman, Glyn, 2003m:11113**
Kalosha, N. I. On the approximation properties of algebraic numbers of the third degree. (Russian. English and Russian summaries) **2003m:11114**
Laurinčikas, Antanas On Sprindjuk's works in "Lietuvos Matematikos Rinkinys". (Lithuanian summary) **2003e:11078**
Silaeva, N. A. An analogue of the Schmidt theorem for curves in a three-dimensional p-adic space. (Russian. English and Russian summaries) **2003m:11115**
(Sprindzhuk, Vladimir Gennad'evich) *see* **Laurinčikas, Antanas, 2003e:11078**
Stakėnas, Vilius On integer parts of some sequences. (Lithuanian summary) **2003d:11111**
— On integer and fractional parts of some sequences. (Lithuanian summary) **2003g:11079**

Items with secondary classifications in 11J83

Boca, Florin-Petre (*with* Zaharescu, Alexandru) On the pair correlation for fractional parts of vector sequences. (English summary) **2003d:11103**
Weiss, Barak Dynamics on parameter spaces: submanifold and fractal subset questions. (English summary) **2003j:37007**
Zaharescu, Alexandru *see* **Boca, Florin-Petre, 2003d:11103**

11J85 Algebraic independence; Gel'fond's method

Bundschuh, Peter (*with* Chirskii, Vladimir G.) Algebraic independence of elements from $\mathbb{C}_p$ over $\mathbb{Q}_p$. I. (English summary) **2003j:11077**
Chirskii, Vladimir G. *see* **Bundschuh, Peter, 2003j:11077**
Nishioka, Kumiko Algebraic independence of reciprocal sums of binary recurrences. II. (English summary) **2003c:11083**
Roy, Damien Interpolation sur des perturbations d'ensembles produits. (English and French summaries) [Interpolation on perturbations of product sets] **2003i:11101**
— Interpolation formulas and auxiliary functions. (English summary) **2003e:11079**
Takeuchi, Mamoru Quantitative results on algebraic independence of some numbers with good approximations. (English summary) **2003f:11104**
Zhu, Yao Chen Algebraic independence of values of certain trigonometric series. (Chinese. English and Chinese summaries) **2003m:11116**

Items with secondary classifications in 11J85

Hessami Pilehrood, Tatiana On the arithmetic properties of values of polylogarithms. (Russian. English and Russian summaries) **2003e:11072**
Zuehlke, John A. The Darmon-Granville equation with algebraic exponents. (English summary) **2003h:11040**

11J86 Linear forms in logarithms; Baker's method

Bugeaud, Yann Linear forms in two m-adic logarithms and applications to Diophantine problems. (English summary) **2003e:11080**

Items with secondary classifications in 11J86

Adhikari, Sukumar Das (*with* Saradha, N.; Shorey, T. N.; Tijdeman, R.) Transcendental infinite sums. (English summary) **2003c:11080**
Bauer, Mark (*with* Bennett, Michael A.) Applications of the hypergeometric method to the generalized Ramanujan-Nagell equation. (English summary) **2003c:11029**
Bennett, Michael A. Lucas' square pyramid problem revisited. **2003g:11028**
— *see also* **Bauer, Mark, 2003c:11029**
Bilu, Yu. F. (*with* Brindza, B.; Kirschenhofer, Peter; Pintér, Ákos; Tichy, Robert F.) Diophantine equations and Bernoulli polynomials. (English summary) **2003a:11025**
Brindza, B. *see* **Bilu, Yu. F. et al., 2003a:11025**
Bugeaud, Yann (*with* Shorey, T. N.) On the Diophantine equation $\frac{x^n-1}{x-1} = \frac{y^q-1}{y-1}$. (English summary) **2003m:11053**
Chen, Hong Ji On the quadratic factorization of $x^n - x - a$. (Chinese. English and Chinese summaries) **2003i:11036**
— *see also* **Chen, Ze Eng, 2003i:11037**
Chen, Yong Gao On integers of the form $k2^n + 1$. (English summary) **2003a:11004**
Chen, Ze Eng (*with* Chen, Hong Ji) Quadratic factorizations of $x^n - x - a$. (Chinese. English and Chinese summaries) **2003i:11037**
Flammenkamp, Achim (*with* Luca, Florian) Binomial coefficients and Lucas sequences. **2003d:11047**
Frey, Gerhard Der Satz von Preda Mihăilescu: die Vermutung von Catalan ist richtig! [The theorem of Preda Mihăilescu: Catalan's conjecture is correct!] **2003j:11034**
Gaudron, Éric Mesure d'indépendance linéaire de logarithmes dans un groupe algébrique commutatif. (English and French summaries) [Linear independence measure of logarithms on a commutative algebraic group] **2003a:11090**
Gouillon, Nicolas Un lemme de zéros. (English and French summaries) [A lemma of zeros] **2003h:11081**
Granville, Andrew (*with* Tucker, Thomas J.) It's as easy as abc. **2003f:11044**
Herrmann, Emanuel (*with* Pethő, Attila) S-integral points on elliptic curves. Notes on a paper of B. M. M. de Weger: "S-integral solutions to a Weierstrass equation" [J. Théor. Nombres Bordeaux **9** (1997), no. 2, 281–301; MR 99d:11027]. (English and French summaries) **2003a:11024**
Heuberger, Clemens (*with* Pethő, Attila; Tichy, Robert F.) Thomas' family of Thue equations over imaginary quadratic fields. (English summary) **2003i:11043**
Járási, István Computing all elements of given index in sextic fields with a cubic subfield. (English summary) **2003h:11037**
Kirschenhofer, Peter *see* **Bilu, Yu. F. et al., 2003a:11025**
Le, Mao Hua A conjecture concerning the exponential Diophantine equation $a^x + b^y = c^z$. **2003m:11054**
Luca, Florian Divisibility properties of binary recurrent sequences. **2003e:11011**
— Euler indicators of binary recurrence sequences. (English summary) **2003g:11016**
— *see also* **Flammenkamp, Achim, 2003d:11047**
Molteni, G. Some arithmetical properties of the generating power series for the sequence $\{\zeta(2k+1)\}_{k=1}^{\infty}$. (English summary) **2003d:11127**
Pethő, Attila Diophantine properties of linear recursive sequences. II. (English summary) **2003d:11021**
— *see also* **Herrmann, Emanuel, 2003a:11024** *and* **Heuberger, Clemens et al., 2003i:11043**
Pintér, Ákos *see* **Bilu, Yu. F. et al., 2003a:11025**
Saradha, N. *see* **Adhikari, Sukumar Das et al., 2003c:11080**
(Schinzel, A.) *see* **Bilu, Yu. F. et al., 2003a:11025**
Shorey, T. N. *see* **Adhikari, Sukumar Das et al., 2003c:11080** *and* **Bugeaud, Yann, 2003m:11053**
Strunkov, S. P. On the Thue-Siegel-Roth theorem. (Russian. Russian summary) **2003h:11077**
Tichy, Robert F. *see* **Bilu, Yu. F. et al., 2003a:11025** *and* **Heuberger, Clemens et al., 2003i:11043**
Tijdeman, R. Some applications of Diophantine approximation. **2003j:11076**
— *see also* **Adhikari, Sukumar Das et al., 2003c:11080**
Tucker, Thomas J. *see* **Granville, Andrew, 2003f:11044**
(de Weger, Benjamin M. M.) *see* **Herrmann, Emanuel, 2003a:11024**
Wu, Qiang[5] On the linear independence measure of logarithms of rational numbers. (English summary) **2003m:11111**
Yuan, Ping Zhi On the number of solutions of simultaneous Pell equations. **2003e:11034**

11J89 Transcendence theory of elliptic and abelian functions

Huttner, Marc (*with* Matala-aho, Tapani) Diophantine approximations for a constant related to elliptic functions. (English summary) **2003c:11084**
Matala-aho, Tapani *see* **Huttner, Marc, 2003c:11084**

Items with secondary classifications in 11J89

Bertolin, Cristiana Périodes de 1-motifs et transcendance. (English summary) [Periods of 1-motives and transcendence] **2003i:11104**
Bruiltet, Sylvain D'une mesure d'approximation simultanée à une mesure d'irrationalité: le cas de $\Gamma(1/4)$ et $\Gamma(1/3)$. (French summary) [From a simultaneous approximation measure to an irrationality measure: the case of $\Gamma(1/4)$ and $\Gamma(1/3)$] **2003f:11102**
Pellarin, Federico Sur une majoration explicite pour un degré d'isogénie liant deux courbes elliptiques. [An explicit upper bound for the degree of an isogeny between two elliptic curves] **2003c:11058**

11J91 Transcendence theory of other special functions

Joyce, G. S. (*with* Zucker, I. J.) Special values of the hypergeometric series. III. **2003i:11102**
Nagata, Makoto Extension of Diophantine approximations to G-functions. (Japanese)
— On Diophantine approximations related to G-functions.
Zucker, I. J. *see* **Joyce, G. S., 2003i:11102**
Zudilin, V. V. On the irrationality of the values of the Riemann zeta function. (Russian. Russian summary) **2003j:11078**
— On the integrality of power expansions related to hypergeometric series. (Russian. Russian summary) **2003h:11080**

Items with secondary classifications in 11J91

Amou, Masaaki Linear independence of the values of q-hypergeometric series. (English summary)
Beukers, Frits On Dwork's accessory parameter problem. (English summary) **2003i:12013**
Bruiltet, Sylvain D'une mesure d'approximation simultanée à une mesure d'irrationalité: le cas de $\Gamma(1/4)$ et $\Gamma(1/3)$. (French summary) [From a simultaneous approximation measure to an irrationality measure: the case of $\Gamma(1/4)$ and $\Gamma(1/3)$] **2003f:11102**
Fischler, Stéphane Formes linéaires en polyzêtas et intégrales multiples. (English and French summaries) [Linear forms in multiple zeta values and multiple integrals] **2003g:11101**
Huttner, Marc (*with* Matala-aho, Tapani) Diophantine approximations for a constant related to elliptic functions. (English summary) **2003c:11084**
Ivankov, P. L. On simultaneous approximations that take into account the specifics of the homogeneous case. (Russian. Russian summary) **2003d:11107**
Matala-aho, Tapani *see* **Huttner, Marc, 2003c:11084**
Nishioka, Kumiko Algebraic independence of reciprocal sums of binary recurrences. II. (English summary) **2003c:11083**

Väänänen, Keijo On linear independence of the values of generalized Heine series. (English summary) **2003k:11120**
Xu, Guang Shan Measure of independence for the values of F functions in $\mathbb{K}_v$. (Chinese. English and Chinese summaries) **2003c:11082**
Yao, Jia-Yan Some transcendental functions over function fields with positive characteristic. (English and French summaries) **2003d:11106**
Zhu, Yao Chen Algebraic independence of values of certain trigonometric series. (Chinese. English and Chinese summaries) **2003m:11116**
Zudilin, V. V. On the irrationality measure of the q-analogue of $\zeta(2)$. (Russian. Russian summary) **2003g:11077**

11J93 Transcendence theory of Drinfel'd and t-modules

Brownawell, W. Dale (*with* Papanikolas, Matthew A.) Linear independence of gamma values in positive characteristic. (English summary) **2003g:11080**
David, Sinnou (*with* Denis, Laurent) Périodes de modules de "l'indépendance quadratique en rang II". (English and French summaries) [Periods of modules of "quadratic independence in rank II"] **2003i:11103**
Denis, Laurent *see* **David, Sinnou, 2003i:11103**
Papanikolas, Matthew A. *see* **Brownawell, W. Dale, 2003g:11080**

11J95 Results involving abelian varieties

Bertolin, Cristiana Périodes de 1-motifs et transcendance. (English summary) [Periods of 1-motives and transcendence] **2003i:11104**
Gaudron, Éric Mesure d'indépendance linéaire de logarithmes dans un groupe algébrique commutatif. (English and French summaries) [Linear independence measure of logarithms on a commutative algebraic group] **2003a:11090**
Gouillon, Nicolas Un lemme de zéros. (English and French summaries) [A lemma of zeros] **2003h:11081**
Grinspan, Pierre Measures of simultaneous approximation for quasi-periods of abelian varieties. (English summary) **2003k:11122**

Items with secondary classifications in 11J95

(Debarre, Olivier) *see* **Tucker, Thomas J., 2003f:11091**
Tucker, Thomas J. Irreducibility, Brill-Noether loci and Vojta's inequality. (English summary) **2003f:11091**

11J97 Analogues of methods in Nevanlinna theory (work of Vojta et al.)

Hyuga, Takayuki An example of analogy of Nevanlinna theory and Diophantine approximation. **2003i:11105**
Noguchi, Junjiro Nevanlinna theory and the *abc*-conjecture. (Japanese)

Items with secondary classifications in 11J97

(Debarre, Olivier) *see* **Tucker, Thomas J., 2003f:11091**
van Frankenhuysen, Machiel The ABC conjecture implies Vojta's height inequality for curves. (English summary) **2003g:11070**
Hu, Pei-Chu (*with* Yang, Chung-Chun) A note on the *abc* conjecture. (English summary) **2003g:32031**
Kobayashi, Ryoichi Toward Nevanlinna theory as a geometric model for Diophantine approximation [translation of Sūgaku **48** (1996), no. 2, 113–127; MR 98k:32036]. (English summary)
McKinnon, David Vojta's main conjecture for blowup surfaces. (English summary) **2003g:11071**
Noguchi, Junjiro (*with* Winkelmann, Jörg) Holomorphic curves and integral points off divisors. (English summary) **2003b:32019**
Tucker, Thomas J. Irreducibility, Brill-Noether loci and Vojta's inequality. (English summary) **2003f:11091**
Winkelmann, Jörg *see* **Noguchi, Junjiro, 2003b:32019**
Yang, Chung-Chun *see* **Hu, Pei-Chu, 2003g:32031**

11J99 None of the above, but in this section

Fujimori, Masami On systems of linear inequalities.

Items with secondary classifications in 11J99

Amoroso, Francesco (*with* Zannier, Umberto) A relative Dobrowolski lower bound over abelian extensions. (English summary) **2003a:11078**
Zannier, Umberto *see* **Amoroso, Francesco, 2003a:11078**

11Kxx Probabilistic theory: distribution modulo 1; metric theory of algorithms

11K06 General theory of distribution modulo 1 [see also 11J71]

Cobeli, Cristian (*with* Groza, Ghiocel; Vâjâitu, Marian; Zaharescu, Alexandru) Generalization of a theorem of Steinhaus. (English summary) **2003h:11082**
Delmer, Francine (*with* Deshouillers, Jean-Marc) On the probability that n and $[n^c]$ are coprime. (English summary) **2003k:11123**
Deshouillers, Jean-Marc *see* **Delmer, Francine, 2003k:11123**
Groza, Ghiocel *see* **Cobeli, Cristian et al., 2003h:11082**
Rudnick, Zeév (*with* Zaharescu, Alexandru) The distribution of spacings between fractional parts of lacunary sequences. **2003i:11106**
Vâjâitu, Marian (*with* Zaharescu, Alexandru) Distinct gaps between fractional parts of sequences. (English summary) **2003d:11112**
— *see also* **Cobeli, Cristian et al., 2003h:11082**
Zaharescu, Alexandru *see* **Vâjâitu, Marian, 2003d:11112; Cobeli, Cristian et al., 2003h:11082** *and* **Rudnick, Zeév, 2003i:11106**

Items with secondary classifications in 11K06

Berend, Daniel (*with* Boshernitzan, M. D.; Kolesnik, G.) Distribution modulo 1 of some oscillating sequences. III. (English summary) **2003h:11085**
Berkes, István (*with* Philipp, Walter; Tichy, Robert F.) Pair correlations and U-statistics for independent and weakly dependent random variables. (English summary) **2003a:60046**
Boshernitzan, M. D. *see* **Berend, Daniel et al., 2003h:11085**
Gao, Li[2] (*with* Zhao, Zhen[4]) A distribution property of the residue system modulo p. (Chinese. English and Chinese summaries)
Goto, Kazuo (*with* Ohkubo, Yukio) Discrepancy of some special sequences. (English summary) **2003c:11086**
Kolesnik, G. *see* **Berend, Daniel et al., 2003h:11085**
Larcher, G. (*with* Pillichshammer, Friedrich) Sums of distances to the nearest integer and the discrepancy of digital nets. **2003m:11122**
Levin, Mordechay B. On normal lattice configurations and simultaneously normal numbers. (English and French summaries) **2003f:11108**
Misevičius, Gintautas Uniform distribution on the four-dimensional torus. I. (Lithuanian summary) **2003d:11116**
— Uniform distribution on the four-dimensional torus. II. (Lithuanian summary) **2003d:11117**
Ohkubo, Yukio *see* **Goto, Kazuo, 2003c:11086**
Philipp, Walter *see* **Berkes, István et al., 2003a:60046**
Pillichshammer, Friedrich *see* **Larcher, G., 2003m:11122**
Tichy, Robert F. *see* **Berkes, István et al., 2003a:60046**
Zhao, Zhen[4] *see* **Gao, Li[2]**

11K16 Normal numbers, radix expansions, etc. [see also 11A63]

Akhunzhanov, R. K. On nonnormal numbers. (Russian) **2003j:11079**
Brown, Gavin[1] (*with* Moran, William; Pollington, Andrew D.) Schmidt's conjecture on normality for dimension two. (English summary) **2003g:11081**
Bugeaud, Yann Nombres de Liouville et nombres normaux. (English and French summaries) [Liouville numbers and normal numbers] **2003e:11081**
Chen, Yong Gao (*with* Ji, Chun Gang) On a function related to multinomial coefficients. I. (English summary) **2003m:11117**
Drmota, Michael (*with* Schoissengeier, Johannes) Digital expansions with respect to different bases. (English summary) **2003m:11118**
Harman, Glyn One hundred years of normal numbers. **2003k:11124**
Hertling, Peter Simply normal numbers to different bases. (English summary) **2003f:11105**
Ito, Shunji (*with* Sano, Yuki) Substitutions, atomic surfaces, and periodic beta expansions. (English summary) **2003f:11106**
Ji, Chun Gang *see* **Chen, Yong Gao, 2003m:11117**
Lagarias, Jeffrey C. On the normality of arithmetical constants. (English summary) **2003f:11107**
Levin, Mordechay B. On normal lattice configurations and simultaneously normal numbers. (English and French summaries) **2003f:11108**
Moran, William *see* **Brown, Gavin[1] et al., 2003g:11081**
Olsen, Lars Ole Rønnow Distribution of digits in integers: fractal dimensions and zeta functions. **2003f:11109**
Pellegrino, D. M. Toward a weak definition of normal numbers. (Spanish. Spanish summary)
Pollington, Andrew D. *see* **Brown, Gavin[1] et al., 2003g:11081**
Sano, Yuki On purely periodic beta-expansions of Pisot numbers. (English summary) **2003c:11085**
— *see also* **Ito, Shunji, 2003f:11106**
Scheicher, Klaus (*with* Thuswaldner, Jörg M.) Canonical number systems, counting automata and fractals. (English summary) **2003b:11070**
Schoissengeier, Johannes *see* **Drmota, Michael, 2003m:11118**
Steiner, Wolfgang Parry expansions of polynomial sequences. (English summary) **2003m:11119**
Thuswaldner, Jörg M. *see* **Scheicher, Klaus, 2003b:11070**

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Barat, Guy (*with* Downarowicz, Tomasz; Liardet, Pierre) Dynamiques associées à une échelle de numération. [Dynamics associated with a numeration system] **2003d:37011**
Cooper, Curtis (*with* Kennedy, Robert E.) The first moment of the number of 1's function in the β-expansion of the positive integers. (English summary) **2003g:11010**
Downarowicz, Tomasz *see* **Barat, Guy et al., 2003d:37011**
Feng, De-Jun (*with* Wen, Zhi Ying) A property of Pisot numbers. (English summary) **2003i:11155**
Kennedy, Robert E. *see* **Cooper, Curtis, 2003g:11010**
Liardet, Pierre *see* **Barat, Guy et al., 2003d:37011**
Wen, Zhi Ying *see* **Feng, De-Jun, 2003i:11155**

11K31 Special sequences

Albrecher, Hansjörg Metric distribution results for sequences $(\{q_n\vec{\alpha}\})$. (English summary) **2003h:11083**
Andrianova, Natalia A. *see* **Dulov, Eugene V., 2003k:11125**
Baxa, C. (*with* Schoissengeier, Johannes) Calculation of improper integrals using $(n\alpha)$-sequences. (English summary) **2003h:11084**
Belaga, Edward G. Effective polynomial upper bounds to perigees and numbers of $(3x + d)$-cycles of a given oddlength. **2003m:11120**
Berend, Daniel (*with* Boshernitzan, M. D.; Kolesnik, G.) Distribution modulo 1 of some oscillating sequences. III. (English summary) **2003h:11085**
Boshernitzan, M. D. *see* **Berend, Daniel et al., 2003h:11085**
Cobeli, Cristian (*with* Vâjâitu, Marian; Zaharescu, Alexandru) On the set $ax + bg^x \pmod p$. (English summary) **2003d:11113**

Dulov, Eugene V. (*with* Andrianova, Natalia A.) Bounding the maximum value of the real-valued sequence. (English summary) **2003k:11125**
Kolesnik, G. *see* **Berend, Daniel et al., 2003h:11085**
Pillichshammer, Friedrich Bounds for the quality parameter of digital shift nets over $\mathbb{Z}_2$. (English summary) **2003i:11107**
Qi, Wen Feng *see* **Zhu, Feng Xiang, 2003j:11080**
Schoissengeier, Johannes *see* **Baxa, C., 2003h:11084**
Vâjâitu, Marian *see* **Cobeli, Cristian et al., 2003d:11113**
Zaharescu, Alexandru *see* **Cobeli, Cristian et al., 2003d:11113**
Zhu, Feng Xiang (*with* Qi, Wen Feng) Randomness of primitive highest level sequence over $\mathbf{Z}/(2^e)$. (Chinese. English and Chinese summaries) **2003j:11080**

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Gonek, S. M. (*with* Krishnaswami, G. S.; Sondhi, V. L.) The distribution of inverses modulo a prime in short intervals. **2003b:11100**
Krishnaswami, G. S. *see* **Gonek, S. M. et al., 2003b:11100**
Mauldin, R. Daniel (*with* Yingst, Andrew Q.) Comments about the Steinhaus tiling problem. (English summary) **2003k:28001**
Rudnick, Zeév (*with* Zaharescu, Alexandru) The distribution of spacings between small powers of a primitive root. (English summary) **2003e:11099**
Sondhi, V. L. *see* **Gonek, S. M. et al., 2003b:11100**
Winkler, Reinhard The order theoretic structure of the set of P-sums of a sequence. (English summary) **2003a:11010**
Yingst, Andrew Q. *see* **Mauldin, R. Daniel, 2003k:28001**
Zaharescu, Alexandru *see* **Rudnick, Zeév, 2003e:11099**

11K36 Well-distributed sequences and other variations

Boyarinov, R. N. The central limit theorem for the uniform distribution of fractional parts of rapidly increasing sequences. (Russian. Russian summary) **2003a:11091**
Limić, Nedžad On completely equidistributed numbers. (English summary) **2003k:11126**
Mori, Makoto Construction of two dimensional low discrepancy sequences. (English summary) **2003g:11082**
Sander, J. W. On the independence of Hartman sequences. (English summary) **2003d:11114**

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Biró, András (*with* Deshouillers, Jean-Marc; Sós, Vera T.) Good approximation and characterization of subgroups of $\mathbb{R}/\mathbb{Z}$. (English summary) **2003d:11102**
Deshouillers, Jean-Marc *see* **Biró, András et al., 2003d:11102**
Guillotin-Plantard, Nadine (*with* Schneider, Dominique) Ergodic theorems for dynamic random walks. (English summary) **2003i:37009**
Mauduit, Christian (*with* Rivat, Joël; Sárközy, András) On the pseudo-random properties of n^c. (English summary) **2003h:11088**
Rivat, Joël *see* **Mauduit, Christian et al., 2003h:11088**
Saidak, Filip An elementary proof of a theorem of Delange. (English and French summaries) **2003k:11149**
Sárközy, András *see* **Mauduit, Christian et al., 2003h:11088**
Schneider, Dominique *see* **Guillotin-Plantard, Nadine, 2003i:37009**
Sós, Vera T. *see* **Biró, András et al., 2003d:11102**
Stratmann, Bernd O. (*with* Urbański, Mariusz; Zinsmeister, Michel) Well-approximable points for Julia sets with parabolic and critical points. (English summary) **2003k:37068**
Urbański, Mariusz *see* **Stratmann, Bernd O. et al., 2003k:37068**
Xiao, Yi-Jun Some geometric properties of $(0, m, 2)$-nets in base $b \geq 2$. (English summary) **2003b:11072**
Zinsmeister, Michel *see* **Stratmann, Bernd O. et al., 2003k:37068**

11K38 Irregularities of distribution, discrepancy [see also 11Nxx]

Bajnok, B. (*with* Damelin, S. B.; Li, Jenny X.; Mullen, Gary L.) A constructive finite field method for scattering points on the surface of d-dimensional spheres. (English summary) **2003h:11086**
Beck, József (*with* Khan, Mizan R.) On the uniform distribution of inverses modulo n. (English summary) **2003k:11127**
Chen, W. W. L. (*with* Skriganov, M. M.) Davenport's theorem in the theory of irregularities of point distribution. (English and Russian summaries) **2003d:11115**
— (*with* Skriganov, M. M.) Explicit constructions in the classical mean squares problem in irregularities of point distribution. (English summary) **2003g:11083**
Damelin, S. B. *see* **Bajnok, B. et al., 2003h:11086**
Goto, Kazuo (*with* Ohkubo, Yukio) Discrepancy of some special sequences. (English summary) **2003c:11086**
Grozdanov, V. S. (*with* Stoilova, S. S.) On the irregularities of distribution. (English summary) **2003f:11110**
Hellekalek, Peter Digital (t, m, s)-nets and the spectral test. **2003m:11121**
Hlawka, Edmund Gleichverteilung und die willkürlichen Funktionen von Poincaré. II. [Uniform distribution and the arbitrary functions of Poincaré. II] **2003h:11087**
Khan, Mizan R. *see* **Beck, József, 2003k:11127**
Larcher, G. (*with* Pillichshammer, Friedrich) Sums of distances to the nearest integer and the discrepancy of digital nets. **2003m:11122**
Li, Jenny X. *see* **Bajnok, B. et al., 2003h:11086**
Magyar, Akos On the discrepancy of point distributions on spheres and hyperbolic spaces. (English summary) **2003k:11128**
Mori, Makoto Structure of low discrepancy sequences for higher dimensions. (Japanese) (*see* **2003a:00039**)
Mullen, Gary L. *see* **Bajnok, B. et al., 2003h:11086**
Niederreiter, Harald (*with* Xing, Chaoping) Constructions of digital nets. **2003a:11092**
— (*with* Özbudak, Ferruh) Constructions of digital nets using global function fields. **2003i:11108**
Ohkubo, Yukio *see* **Goto, Kazuo, 2003c:11086**
Özbudak, Ferruh *see* **Niederreiter, Harald, 2003i:11108**
Pillichshammer, Friedrich On the L_p-discrepancy of the Hammersley point set. (English summary) **2003c:11087**
— *see also* **Larcher, G., 2003m:11122**
Skriganov, M. M. *see* **Chen, W. W. L., 2003d:11115** *and* **2003g:11083**
Stoilova, S. S. *see* **Grozdanov, V. S., 2003f:11110**
Valkó, Benedek Discrepancy of arithmetic progressions in higher dimensions. (English summary) **2003b:11071**
Xiao, Yi-Jun Some geometric properties of $(0, m, 2)$-nets in base $b \geq 2$. (English summary) **2003b:11072**
Xing, Chaoping *see* **Niederreiter, Harald, 2003a:11092**

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Andrievskii, Vladimir V. (*with* Blatt, H.-P.; Mhaskar, Hrushikesh N.) A local discrepancy theorem. (English summary) **2003g:11084**
Belaga, Edward G. Effective polynomial upper bounds to perigees and numbers of $(3x + d)$-cycles of a given oddlength. **2003m:11120**
Berend, Daniel (*with* Boshernitzan, M. D.; Kolesnik, G.) Distribution modulo 1 of some oscillating sequences. III. (English summary) **2003h:11085**
Blatt, H.-P. *see* **Andrievskii, Vladimir V. et al., 2003g:11084**
Boshernitzan, M. D. *see* **Berend, Daniel et al., 2003h:11085**
Chazelle, Bernard (*with* Lvov, Alexey) A trace bound for the hereditary discrepancy. (English summary) **2003b:68190**
El Mahassni, Edwin (*with* Shparlinski, Igor E.) On the uniformity of distribution of the elliptic curve ElGamal signature. (English summary) **2003h:11094**
Faure, Henri (*with* Tezuka, Shu) Another random scrambling of digital (t, s)-sequences. (English summary) (*see* **2003i:65006**)
Fujita, Takahiko (*with* Ito, Shunji; Ninomiya, Syoiti) The generalized van der Corput sequence and its application to numerical integration. (English summary) **2003c:65003**
Götz, Mario Discrepancy and the error in integration. (English summary) **2003g:42058**
(Gowers, W. T.) *see* **A new proof of Szemeredi's theorem**
Hickernell, Fred J. *see* **Yue, Rong-Xian, 2003g:11086**
Ito, Shunji *see* **Fujita, Takahiko et al., 2003c:65003**
Kolesnik, G. *see* **Berend, Daniel et al., 2003h:11085**
L'Ecuyer, Pierre (*with* Panneton, François) Construction of equidistributed generators based on linear recurrences modulo 2. (English summary) (*see* **2003i:65006**)
Lvov, Alexey *see* **Chazelle, Bernard, 2003b:68190**
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Ninomiya, Syoiti *see* **Fujita, Takahiko et al., 2003c:65003**
Nowak, Werner Georg On the mean lattice point discrepancy of a convex disc. (English summary) **2003a:11129**
Panneton, François *see* **L'Ecuyer, Pierre, (2003i:65006)**
Pirsic, Gottlieb A software implementation of Niederreiter-Xing sequences. (English summary) (*see* **2003i:65006**)
Shparlinski, Igor E. *see* **El Mahassni, Edwin, 2003h:11094**
Tezuka, Shu Quasi-Monte Carlo—discrepancy between theory and practice. (English summary) (*see* **2003i:65006**)
— *see also* **Faure, Henri, (2003i:65006)**
Yue, Rong-Xian (*with* Hickernell, Fred J.) The discrepancy and gain coefficients of scrambled digital nets. (English summary) **2003g:11086**

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11K41 Continuous, p-adic and abstract analogues

Andrievskii, Vladimir V. (*with* Blatt, H.-P.; Mhaskar, Hrushikesh N.) A local discrepancy theorem. (English summary) **2003g:11084**
Blatt, H.-P. *see* **Andrievskii, Vladimir V. et al., 2003g:11084**
Mhaskar, Hrushikesh N. *see* **Andrievskii, Vladimir V. et al., 2003g:11084**
Misevičius, Gintautas Uniform distribution on the four-dimensional torus. I. (Lithuanian summary) **2003d:11116**
— Uniform distribution on the four-dimensional torus. II. (Lithuanian summary) **2003d:11117**
Niederreiter, Harald (*with* Sookoo, Norris) Partial densities on locally compact abelian groups and uniformly distributed sequences. (English summary) **2003e:11082**
Sookoo, Norris *see* **Niederreiter, Harald, 2003e:11082**
Vâjâitu, Marian (*with* Zaharescu, Alexandru) An Erdős-Turán inequality in p-adic fields. (English summary) **2003a:11093**
Zaharescu, Alexandru *see* **Vâjâitu, Marian, 2003a:11093**

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Bajnok, B. (*with* Damelin, S. B.; Li, Jenny X.; Mullen, Gary L.) A constructive finite field method for scattering points on the surface of d-dimensional spheres. (English summary) **2003h:11086**
Damelin, S. B. *see* **Bajnok, B. et al., 2003h:11086**
Friedel, Ilja (*with* Keller, Alexander) Fast generation of randomized low-discrepancy point sets. (English summary) (*see* **2003i:65006**)
Keller, Alexander *see* **Friedel, Ilja, (2003i:65006)**
Kubota, Hisayoshi (*with* Sugita, Hiroshi) Probabilistic proof of limit theorems in number theory by means of adeles. **2003g:11088**
Li, Jenny X. *see* **Bajnok, B. et al., 2003h:11086**
Mullen, Gary L. *see* **Bajnok, B. et al., 2003h:11086**
Sugita, Hiroshi *see* **Kubota, Hisayoshi, 2003g:11088**

11K45 Pseudo-random numbers; Monte Carlo methods

Bakeva, Verica *see* **Markovski, Smile et al., 2003a:11094**

Emmerich, Frank Average equidistribution and statistical independence properties of digital inversive pseudorandom numbers over parts of the period. (English summary) **2003j:11081**
Entacher, Karl (*with* Schell, Thomas; Uhl, Andreas) Efficient lattice assessment for LCG and GLP parameter searches. (English summary) **2003c:11088**
Friedlander, John B. (*with* Pomerance, Carl; Shparlinski, Igor E.) Corrigendum to: "Period of the power generator and small values of Carmichael's function" [Math. Comp. **70** (2001), no. 236, 1591–1605; MR 2002g:11112]. **2003i:11109**
Gligoroski, Danilo *see* **Markovski, Smile et al., 2003a:11094**
Hickernell, Fred J. *see* **Yue, Rong-Xian, 2003g:11086**
Markovski, Smile (*with* Gligoroski, Danilo; Bakeva, Verica) Random walk tests for pseudo-random number generators. (English summary) **2003a:11094**
Mauduit, Christian (*with* Rivat, Joël; Sárközy, András) On the pseudo-random properties of n^c. (English summary) **2003h:11088**
Niederreiter, Harald (*with* Winterhof, Arne) Lattice structure and linear complexity of nonlinear pseudorandom numbers. (English summary) **2003k:11129**
— (*with* Shparlinski, Igor E.) On the average distribution of inversive pseudorandom numbers. (English summary) **2003g:11085**
Philipp, Walter (*with* Tichy, Robert F.) Metric theorems for distribution measures of pseudorandom sequences. (English summary) **2003e:11083**
Pomerance, Carl *see* **Friedlander, John B. et al., 2003i:11109**
Rivat, Joël *see* **Mauduit, Christian et al., 2003h:11088**
Sárközy, András A finite pseudorandom binary sequence. (English summary) **2003j:11082**
— *see also* **Mauduit, Christian et al., 2003h:11088**
Schell, Thomas *see* **Entacher, Karl et al., 2003c:11088**
Shparlinski, Igor E. On the linear complexity of the power generator. (English summary) **2003a:11095**
— On the uniformity of distribution of the ElGamal signature. (English summary) **2003d:11118**
— *see also* **Niederreiter, Harald, 2003g:11085** *and* **Friedlander, John B. et al., 2003i:11109**
Tichy, Robert F. *see* **Philipp, Walter, 2003e:11083**
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Winterhof, Arne *see* **Niederreiter, Harald, 2003k:11129**
Yasutomi, Kenji A limit theorem for sequences generated by Weyl transformation: disappearance of dependence. (English summary) **2003i:11110**
Yue, Rong-Xian (*with* Hickernell, Fred J.) The discrepancy and gain coefficients of scrambled digital nets. (English summary) **2003g:11086**
Zubkov, A. M. Peculiarities of two-dimensional distributions of a sequence generated by a linear congruential generator. (Russian. Russian summary) **2003b:11073**

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Andrianova, Natalia A. *see* **Dulov, Eugene V., 2003k:11125**
Choe, Geon Ho (*with* Kim, Dong Han) The first return time test of pseudorandom numbers. (English summary) **2003f:65013**
Cobeli, Cristian (*with* Vâjâitu, Marian; Zaharescu, Alexandru) On the set $ax + bg^x \pmod p$. (English summary) **2003d:11113**
Devroye, Luc (*with* Neininger, Ralph) Density approximation and exact simulation of random variables that are solutions of fixed-point equations. (English summary) **2003e:62079**
Dulov, Eugene V. (*with* Andrianova, Natalia A.) Bounding the maximum value of the real-valued sequence. (English summary) **2003k:11125**
Fuji-Hara, Ryoh (*with* Miao, Ying) A note on geometric structures of linear ordered orthogonal arrays and (T, M, S)-nets of low strength. (English summary) **2003g:05031**
Gomez-Perez, Domingo *see* **Gutiérrez, Jaime G., (2003a:94002)**
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Grošek, Otokar (*with* Nemoga, Karol; Satko, Ladislav) A remark to Luby-Rackoff and Ueli M. Maurer pseudorandom generators. (English summary) **2003c:94014**
Gutiérrez, Jaime G. (*with* Gomez-Perez, Domingo) Iterations of multivariate polynomials and discrepancy of pseudorandom numbers. (English summary) (*see* **2003a:94002**)
Hellekalek, Peter Digital (t, m, s)-nets and the spectral test. **2003m:11121**
Hickernell, Fred J. (*with* Hong, Hee Sun) Quasi-Monte-Carlo methods and their randomizations. (English summary) **2003g:65006**
Hong, Hee Sun *see* **Hickernell, Fred J., 2003g:65006**
Kim, Dong Han *see* **Choe, Geon Ho, 2003f:65013**
Kurakin, V. L. *see* **Kuz'min, Alekseĭet al., 2003g:13030**
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Larin, M. V. Transitive polynomial transformations of residue rings. (Russian. Russian summary) **2003h:11021**
Luo, Ping[1] A combined generator based on linear congruential generators and its structural improvement. (Chinese. English summary) **2003f:65015**
Matsumoto, Makoto[2] (*with* Nishimura, Takuji) A nonempirical test on the weight of pseudorandom number generators. (English summary) (*see* **2003i:65006**)
Miao, Ying *see* **Fuji-Hara, Ryoh, 2003g:05031**
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Neininger, Ralph *see* **Devroye, Luc, 2003e:62079**
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Niederreiter, Harald (*with* Shparlinski, Igor E.) Recent advances in the theory of nonlinear pseudorandom number generators. (English summary) **2003k:65005**
— (*with* Pirsic, Gottlieb) A Kronecker product construction for digital nets. (English summary) **2003m:65010**
— (*with* Xing, Chaoping) Constructions of digital nets. **2003a:11092**
— (*with* Özbudak, Ferruh) Constructions of digital nets using global function fields. **2003i:11108**
Nishimura, Takuji *see* **Matsumoto, Makoto[2], (2003i:65006)**
Özbudak, Ferruh *see* **Niederreiter, Harald, 2003i:11108**
Pi, Xin Ming A sort of pseudorandom number sequences with extremely long period. (Chinese. English summary) **2003d:65005**
Pillichshammer, Friedrich Bounds for the quality parameter of digital shift nets over $\mathbb{Z}_2$. (English summary) **2003i:11107**
Pirsic, Gottlieb *see* **Niederreiter, Harald, 2003m:65010**
Satko, Ladislav *see* **Grošek, Otokar et al., 2003c:94014**
Shparlinski, Igor E. On the distribution of the Diffie-Hellman pairs. (English summary) **2003b:11134**
— *see also* **Niederreiter, Harald, 2003k:65005**
Tang, Hui-Chin Combined random number generator via the generalized Chinese remainder theorem. (English summary) **2003c:65006**
Vâjâitu, Marian *see* **Cobeli, Cristian et al., 2003d:11113**
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11K50 Metric theory of continued fractions [see also 11A55, 11J70]

Iosifescu, Marius (*with* Kraaikamp, Cor) On Denjoy's canonical continued fraction expansion. **2003m:11123**
Kraaikamp, Cor *see* **Iosifescu, Marius, 2003m:11123**
Nogueira, Arnaldo The Borel-Bernstein theorem for multidimensional continued fractions. (English summary) **2003f:11111**
Okano, Takeshi Explicit continued fractions with expected partial quotient growth. (English summary) **2003a:11096**
Popescu, Cristina On a Gauss-Kuzmin problem for the α-continued fractions. (English summary) **2003a:11097**
Pustyl'nikov, L. D. Infinite-dimensional generalized continued fractions, distribution of quadratic residues and non-residues, and ergodic theory. (English summary) **2003j:11083**
Sebe, Gabriela Ileana The distribution of certain sequences connected with the regular continued fraction. (English and Romanian summaries) **2003b:11074**
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Dajani, Karma (*with* Fieldsteel, Adam) Equipartition of interval partitions and an application to number theory. (English summary) **2003f:11112**
— (*with* Kraaikamp, Cor) ★ Ergodic theory of numbers. (English summary) **2003f:37014**
Fieldsteel, Adam *see* **Dajani, Karma, 2003f:11112**
Ito, Shunji Diophantine approximations, substitutions, and fractals.
Jenkinson, Oliver (*with* Pollicott, Mark) Computing the dimension of dynamically defined sets: E_2 and bounded continued fractions. (English summary) **2003m:37027**
Kraaikamp, Cor *see* **Dajani, Karma, 2003f:37014**
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Sebe, Gabriela Ileana A two-dimensional Gauss-Kuzmin theorem for singular continued fractions. (English summary) **2003e:37009**
— Ruelle-Mayer operators related to the Gaussian algorithm. (English and Romanian summaries) **2003b:37037**
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Simon, Károly (*with* Solomyak, Boris; Urbański, Mariusz) Hausdorff dimension of limit sets for parabolic IFS with overlaps. (English summary) **2003c:37030b**
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Solomyak, Boris *see* **Simon, Károly et al., 2003c:37030a** *and* **2003c:37030b**
Urbański, Mariusz *see* **Simon, Károly et al., 2003c:37030a** *and* **2003c:37030b**

11K55 Metric theory of other algorithms and expansions; measure and Hausdorff dimension [see also 11N99, 28Dxx]

Baake, Michael (*with* Moody, Robert V.) Self-similarities and invariant densities for model sets. (English summary) **2003b:11075**
Barreira, Luis (*with* Saussol, Benoît; Schmeling, Jörg) Distribution of frequencies of digits via multifractal analysis. (English summary) **2003m:11124**
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— (*with* Kraaikamp, Cor) From greedy to lazy expansions and their driving dynamics. (English summary) **2003h:11089**
Fieldsteel, Adam *see* **Dajani, Karma, 2003f:11112**
Ganatsiou, Ch. On the stochastic behaviour of the digits in the modified Engel-type alternating series representations for real numbers. (English summary) **2003c:11089**
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Myjak, Józef (*with* Szarek, Tomasz) Szpilrajn type theorem for concentration dimension. (English summary) **2003c:11090**
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Saussol, Benoît *see* **Barreira, Luis et al., 2003m:11124**
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Szarek, Tomasz *see* **Myjak, Józef, 2003c:11090**
Thuswaldner, Jörg M. Fractals and number systems in real quadratic number fields. (English summary) **2003c:11091**
Tichy, Robert F. *see* **Grabner, Peter J. et al., 2003f:11113**

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Arnoux, Pierre *see* **Sano, Yuki et al., 2003c:37016**
Benedek, A. (*with* Panzone, Rafael) Tilings associated with number systems and the geometry of sets derived from the bases $-n+i$. (English summary) **2003f:28012**
Bugeaud, Yann Approximation by algebraic integers and Hausdorff dimension. (English summary) **2003d:11110**
Costé, Alain Un système dynamique lié à la suite des nombres premiers. (English and French summaries) [A dynamical system linked to the prime number sequence] **2003f:37013**
Dajani, Karma (*with* Kraaikamp, Cor) ★ Ergodic theory of numbers. (English summary) **2003f:37014**
Durand, Fabien (*with* Schneider, Dominique) Ergodic averages with deterministic weights. (English and French summaries) **2003a:37011**
Einsiedler, Manfred (*with* Everest, Graham; Ward, Thomas B.) Entropy and the canonical height. (English summary) **2003f:11092**
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Furstenberg, H. From the Erdős-Turán conjecture to ergodic theory—the contribution of combinatorial number theory to dynamics. (English summary) **2003j:37010**
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Katok, Svetlana *see* **Katok, Anatole et al., 2003b:37007**
Kochubeĭ, A. N. Hausdorff measure for a stable-like process over an infinite extension of a local field. (English summary) **2003m:28010**
Kra, Bryna (*with* Schmeling, Jörg) Diophantine classes, dimension and Denjoy maps. **2003b:37057**
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Magyar, Akos Diophantine equations and ergodic theorems. (English summary) **2003f:37015**
Moure, María del Carmen Description of the convex hulls of fractal sets in the bases $-n+1$ and double points in the boundary for the base $-2+i$. (Spanish. Spanish summary) **2003g:28019**
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Nogueira, Arnaldo Relatively prime numbers and invariant measures under the natural action of $\mathrm{SL}(n,\mathbb{Z})$ on $\mathbb{R}^n$. (English summary) **2003j:37006**
Olsen, Lars Ole Rønnow Divergence points of deformed empirical measures. (English summary) **2003k:37038**
Panzone, Rafael *see* **Benedek, A., 2003f:28012**
Rynne, Bryan P. Simultaneous Diophantine approximation on manifolds and Hausdorff dimension. (English summary) **2003m:11104**
Sano, Yuki (*with* Arnoux, Pierre; Ito, Shunji) Higher dimensional extensions of substitutions and their dual maps. (English summary) **2003c:37016**
Schmeling, Jörg *see* **Kra, Bryna, 2003h:37057**
Schmidt, Klaus[1] *see* **Katok, Anatole et al., 2003h:37007**
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Shkredov, I. D. Recurrence of incomplete quotients of continued fractions. (Russian) **2003k:37014**
Ward, Thomas B. *see* **Einsiedler, Manfred et al., 2003f:11092**

11K60 Diophantine approximation [see also 11Jxx]

Hersonsky, Sa'ar (*with* Paulin, Frédéric) Diophantine approximation in negatively curved manifolds and in the Heisenberg group. (English summary) **2003i:11112**
— *see also* **Parkkonen, Jouni, 2003i:11113**
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Paulin, Frédéric *see* **Hersonsky, Sa'ar, 2003i:11112** *and* **Parkkonen, Jouni, 2003i:11113**

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Bugeaud, Yann Approximation par des nombres algébriques de degré borné et dimension de Hausdorff. (English summary) [Approximation by algebraic numbers of fixed degree and Hausdorff dimension] **2003i:11111**
Dajani, Karma (*with* Kraaikamp, Cor) ★ Ergodic theory of numbers. (English summary) **2003f:37014**
Fuchs, Michael On a problem of W. J. LeVeque concerning metric Diophantine approximation. (English summary) **2003m:11112**
Hensley, Doug The geometry of badly approximable vectors. (English summary) **2003d:11104**
Ito, Shunji Diophantine approximations, substitutions, and fractals.
Kraaikamp, Cor *see* **Dajani, Karma, 2003f:37014**
Stakėnas, Vilius On integer and fractional parts of some sequences. (Lithuanian summary) **2003g:11079**

11K65 Arithmetic functions [see also 11Nxx]

De Koninck, J.-M. (*with* Tenenbaum, Gérald) Sur la loi de répartition du k-ième facteur premier d'un entier. (French summary) [On the distribution law of the kth prime factor of an integer] **2003e:11085**
Drmota, Michael (*with* Fuchs, Michael; Manstavičius, Eugenijus) Functional limit theorems for digital expansions. (English summary) **2003j:11084**
Fehér, János Über die q-multiplikative Funktionen die den Mittelwert gleich Null haben. (German summary) [On q-multiplicative functions with zero mean] **2003d:11119**
Fuchs, Michael *see* **Drmota, Michael et al., 2003j:11084**
Galambos, J. (*with* Simonelli, Italo) A purely probabilistic proof for a theorem of Bakstys on multiplicative arithmetical functions. (English summary) **2003h:11090**
Indlekofer, Karl-Heinz (*with* Manstavičius, Eugenijus) Distribution of multiplicative functions defined on semigroups. (English summary) **2003f:11114**
— (*with* Timofeev, Nikolai M.) On multiplicative functions with mean-value one on the set of shifted primes. (English summary) **2003e:11086**
— (*with* Timofeev, Nikolai M.) Divisors of shifted primes. (English summary) **2003b:11076**
Kim, Dong-Hyun On the distribution modulo 1 of q-additive functions. (English summary) **2003e:11087**
Kubilius, Jonas On the remainder term in the limit theorems for additive arithmetical functions. (English summary) **2003j:11085**
Kubota, Hisayoshi (*with* Sugita, Hiroshi) Probabilistic proof of limit theorems in number theory by means of adeles. **2003g:11088**
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Šiaulys, Jonas The convergence to the Poisson law in number theory. (English and Lithuanian summaries) **2003h:11091**
— Logarithmic frequency of values of additive functions. (Russian. Russian and Lithuanian summaries) **2003i:11114**
Simonelli, Italo *see* **Galambos, J., 2003h:11090**
Skrabutėnas, Rimantas The local limit theorem of large deviations for multiplicative functions. (Lithuanian. English summary) **2003c:11093**
Sugita, Hiroshi *see* **Kubota, Hisayoshi, 2003g:11088**
Tenenbaum, Gérald *see* **De Koninck, J.-M., 2003e:11085**
Timofeev, Nikolai M. *see* **Indlekofer, Karl-Heinz, 2003b:11076** *and* **2003e:11086**
Zakharovas, Vitas Cesàro summation and multiplicative functions on a symmetric group. (Russian. Lithuanian summary) **2003i:11115**
Zhang, Wen-Bin[1] A central limit theorem for the number of distinct degrees of prime factors in additive arithmetical semigroups. **2003k:11130**

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Delmer, Francine (*with* Deshouillers, Jean-Marc) On the probability that n and $[n^c]$ are coprime. (English summary) **2003k:11123**
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Diaconis, Persi G. H. Hardy and probability??? (English summary) **2003d:01023**
Granville, Andrew (*with* Soundararajan, K.) Upper bounds for $|L(1,\chi)|$. **2003h:11104**
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— (*with* Kátai, I.) On linear combinations of q-additive functions. **2003h:11120**
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Kátai, I. *see* **Indlekofer, Karl-Heinz et al., 2003e:11101**; **2003h:11120** *and* **2003k:11150**
Lee, Y.-W. *see* **Indlekofer, Karl-Heinz et al., 2003k:11150**
Mačiulis, Algirdas (*with* Šiaulys, Jonas) On the limits for distributions of additive functions. (Lithuanian summary) **2003d:60057**
Rivat, Joël On pseudo-random properties of $P(n)$ and $P(n+1)$. (English summary) **2003c:11117**
Šiaulys, Jonas On the logarithmic frequence of the values of additive functions. (Lithuanian summary) **2003d:11149**
— *see also* **Mačiulis, Algirdas, 2003d:60057**
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Sugita, Hiroshi (*with* Takanobu, Satoshi) Way of looking at probability theory, "the probability of 2 integers working together"—verification of the estimate through numerical experimentation. (Japanese) (*see* **2003a:00039**)
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Timofeev, Nikolai M. (*with* Tulyaganov, S. T.) Mean values of multiplicative functions with weight. (Russian. Russian summary) **2003g:11110**
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Zhang, Wen-Bin[1] Analytic and probabilistic theory of additive arithmetical semigroups. (English summary) **2003c:11123**

11K70 Harmonic analysis and almost periodicity

Moody, Robert V. Uniform distribution in model sets. (English summary) **2003d:11120**

Items with secondary classifications in 11K70

Li, Daniel (*with* Queffélec, Hervé; Rodríguez-Piazza, L.) Some new thin sets of integers in harmonic analysis. (English summary) **2003e:43007**
Magyar, Akos (*with* Stein, Elias M.; Wainger, S.) Discrete analogues in harmonic analysis: spherical averages. (English summary) **2003f:42028**
Queffélec, Hervé *see* **Li, Daniel et al., 2003e:43007**
Rodríguez-Piazza, L. *see* **Li, Daniel et al., 2003e:43007**
Sander, J. W. On the independence of Hartman sequences. (English summary) **2003d:11114**

Stein, Elias M. *see* **Magyar, Akos et al., 2003f:42028**
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Winkler, Reinhard Ergodic group rotations, Hartman sets and Kronecker sequences. (English summary) **2003d:37007**

11K99 None of the above, but in this section

Vu, Van H. Chernoff type bounds for sums of dependent random variables and applications in additive number theory. **2003k:11131**

Items with secondary classifications in 11K99

Biane, Philippe (*with* Pitman, James W.; Yor, Marc) Probability laws related to the Jacobi theta and Riemann zeta functions, and Brownian excursions. (English summary) **2003b:11083**
Bourgain, Jean Λ_p-sets in analysis: results, problems and related aspects. **2003e:43006**
Fang, Kai-Tai (*with* Ma, Chang-Xing; Mukerjee, Rahul) Uniformity in fractional factorials. (English summary) (*see* **2003i:65006**)
Green, Ben Arithmetic progressions in sumsets. (English summary) **2003i:11148**
Ignatavičiūtė, Jolita On the statistical properties of the Lerch zeta function. (Russian. Russian and Lithuanian summaries) **2003c:11105**
— On the statistical properties of the Lerch zeta function. II. (Russian. Russian and Lithuanian summaries) **2003i:11130**
Kačinskaitė, Roma On the value-distribution of Matsumoto zeta-function on the complex plane. (Lithuanian summary) **2003i:11133**
Ma, Chang-Xing *see* **Fang, Kai-Tai et al., (2003i:65006)**
Masol, V. V. Asymptotics of the distribution of some characteristics of random spaces over a finite field. (Ukrainian. Ukrainian summary) **2003k:60022**
Mukerjee, Rahul *see* **Fang, Kai-Tai et al., (2003i:65006)**
Pitman, James W. *see* **Biane, Philippe et al., 2003b:11083**
Reich, Ludwig On the distribution of formal power series transformations with respect to embeddability in the order topology. **2003b:13034**
Stadje, Wolfgang The residues modulo m of products of random integers. (English summary) **2003m:60025**
Vâjâitu, Marian (*with* Zaharescu, Alexandru) Distribution of values of rational maps on the $\mathbf{F}_p$-points on an affine curve. (English summary) **2003f:11089**
Yor, Marc *see* **Biane, Philippe et al., 2003b:11083**
Zaharescu, Alexandru *see* **Vâjâitu, Marian, 2003f:11089**

11Lxx Exponential sums and character sums {For finite fields, see 11Txx.}

Items with secondary classifications in 11Lxx

Krätzel, Ekkehard ★ Analytische Funktionen in der Zahlentheorie. (German) [Analytic functions in number theory] **2003d:11001**

11L03 Trigonometric and exponential sums, general

Berndt, Bruce C. (*with* Yeap, Boon Pin) Explicit evaluations and reciprocity theorems for finite trigonometric sums. **2003h:11092**
Danas, George On some particular character and exponential sums. (English summary) **2003b:11077**
Eliahou, Shalom (*with* Kervaire, Michel) Circulant 16-modular Hadamard matrices and Jacobi sums. (English summary) **2003k:11132**
Grytczuk, Aleksander Note on Ramanujan sums. (English summary) **2003j:11086**
Hong, Shao-fang Newton polygons for L-functions of exponential sums of polynomials of degree six over finite fields. (English summary) **2003i:11116**
Kervaire, Michel *see* **Eliahou, Shalom, 2003k:11132**
Kohel, David R. (*with* Shparlinski, Igor E.) On exponential sums and group generators for elliptic curves over finite fields. (English summary) **2003c:11094**
Shparlinski, Igor E. *see* **Kohel, David R., 2003c:11094**
Takano, Katsuo On a certain formula of trigonometric sum.
Yeap, Boon Pin *see* **Berndt, Bruce C., 2003h:11092**

Items with secondary classifications in 11L03

Bérczi, Gergely On the distribution of products of members of a sequence with positive density. (English summary) **2003m:11013**
Castro, Francis N. On incomplete exponential sums over finite fields. (English summary) **2003b:11081**
Danas, George On a characterization of particular types of character and exponential sums. (English summary) **2003f:11115**
Farkas, Hershel M. (*with* Kra, Irwin) On theta constant identities and the evaluation of trigonometric sums. **2003k:11067**
Furuya, Jun On exponential sums involving the ideal counting function in quadratic number fields. (English summary) **2003j:11111**
Hikami, Kazuhiro Logarithmic correction of Kashaev's invariant.
Khalfalah, A. (*with* Lodha, Sachin; Szemerédi, Endre) Tight bound for the density of sequence of integers the sum of no two of which is a perfect square. (English summary) **2003e:11007**
Kim, Dae San Exponential sums for $O^+(2n, q)$ and their applications. (English summary) **2003c:11154**
Kiuchi, Isao (*with* Tanigawa, Yoshio) On arithmetical functions related to the Ramanujan sum. (English summary) **2003m:11130**
Kra, Irwin *see* **Farkas, Hershel M., 2003k:11067**
Lodha, Sachin *see* **Khalfalah, A. et al., 2003e:11007**
Paliogiannis, Fotios C. On a characterization of Kummar sums. (English summary) [On a characterization of Kummer sums] **2003k:11184**
Scholten, Jasper (*with* Zhu, Hui June) The first slope case of Wan's conjecture. (English summary) **2003h:11155**
Šleževičienė, Rasa A joint limit theorem for trigonometric polynomials. (Lithuanian summary) **2003b:11097**
Srivastava, Hari M. *see* **Takano, Katsuo, 2003j:33001**
Szemerédi, Endre *see* **Khalfalah, A. et al., 2003e:11007**
Takano, Katsuo (*with* Srivastava, Hari M.) Remarks on some families of trigonometric sums. (English summary) **2003j:33001**
Tanigawa, Yoshio *see* **Kiuchi, Isao, 2003m:11130**
Zhu, Hui June *see* **Scholten, Jasper, 2003h:11155**

11L05 Gauss and Kloosterman sums; generalizations

Cherednik, Ivan One-dimensional double Hecke algebra and Gaussian sums. (English summary) **2003i:11117**
Cobeli, Cristian (*with* Zaharescu, Alexandru) Generalization of a problem of Lehmer. (English summary) **2003a:11100**
Conrad, Keith On Weil's proof of the bound for Kloosterman sums. (English summary) **2003j:11087**
Danas, George On a characterization of particular types of character and exponential sums. (English summary) **2003f:11115**
Evans, Ronald Twisted hyper-Kloosterman sums over finite rings of integers. **2003m:11125**
Fisher, Benji The stationary-phase method for exponential sums with multiplicative characters. (English summary) **2003m:11126**
Gao, Li[2] A generalization for Lehmer numbers. (Chinese. English and Chinese summaries)
Glazunov, N. M. Moduli spaces, equidistribution, bounds and rational points of algebraic curves. (Russian. English and Ukrainian summaries) **2003a:11101**
Hahn, Sang Geun *see* **Lee, Dong Hoon[1], 2003b:11078**
Ito, Hiroshi[2] Some results concerning cubic Gauss sums and elliptic functions. (Japanese) **2003d:11121**
Kable, Anthony C. Legendre sums, Soto-Andrade sums and Kloosterman sums. (English summary) **2003m:11127**
Lee, Dong Hoon[1] (*with* Hahn, Sang Geun) Gauss sums and binomial coefficients. (English summary) **2003b:11078**
Liu, Chun Lei[1] Twisted higher moments of Kloosterman sums. (English summary) **2003a:11102**
Livné, R. (*with* Patterson, S. J.) The first moment of cubic exponential sums. **2003d:11122**
Patterson, S. J. *see* **Livné, R., 2003d:11122**
Vasilenko, O. N. An application of trigonometric sums to test the primality of numbers. (Russian. Russian summary) **2003b:11079**
Yi, Yuan *see* **Zhang, Wen Peng, 2003f:11116**
Zaharescu, Alexandru *see* **Cobeli, Cristian, 2003a:11100**
Zhang, Wen Peng On the first power mean of L-functions with the weight of general Kloosterman sums. (English summary) **2003h:11093**
— The first power mean of the inversion of L-functions and general Kloostermann sums. (English summary) [The first power mean of the inversion of L-functions and general Kloosterman sums] **2003j:11088**
— (*with* Yi, Yuan) On the upper bound estimate of Cochrane sums. (English summary) **2003f:11116**

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Beck, József (*with* Khan, Mizan R.) On the uniform distribution of inverses modulo n. (English summary) **2003k:11127**
Chubarikov, V. N. *see* **Zhimbo, È. K., 2003f:11147**
Cobeli, Cristian (*with* Zaharescu, Alexandru) The order of inverses mod q. (English summary) **2003f:11149**
— (*with* Zaharescu, Alexandru) A question on the distribution of points on a curve over a finite field. (English summary) **2003m:11088**
Deng, Yuping *see* **Zhang, Wen Peng, 2003m:11140**
Gao, Li[2] The even power mean of the inversion of Dirichlet L-functions with the weight of Gauss sums. (Chinese. English and Chinese summaries)
— (*with* Ma, Gao Ding) A second-power mean theorem of Dirichlet L-functions with weight of Gauss sums. (Chinese. English and Chinese summaries) **2003m:11131**
Goh, William M. Y. On a generalization of Polya inequality and some of its statistical implications. (English summary) **2003c:11096**
Hall, R. R. (*with* Shiu, Peter) The distribution of totatives. (English summary) **2003a:11005**
Helleseth, Tor (*with* Zinov'ev, V. A.) New Kloosterman sums identities over $\mathbf{F}_{2^m}$ for all m. (English summary) **2003k:11183**
Huiszoon, L. R. (*with* Schalm, Koenraad; Schellekens, A. N.) Geometry of WZW orientifolds. (English summary) **2003a:81177**
Ichihara, Yumiko The evaluation of the sum over arithmetic progressions for the coefficients of the Rankin-Selberg series. II. (English summary) **2003e:11049**
Jacquet, Hervé Transfert lisse d'intégrales de Kloosterman. (English and French summaries) [Smooth transfer of Kloosterman integrals] **2003k:11082**
Khan, Mizan R. *see* **Beck, József, 2003k:11127**
Kim, Dae San Hodges' Kloosterman sums. (English summary) **2003k:11182**
— Exponential sums for $O(2n+1, q)$ and their applications. (English summary) **2003d:11179**
Ma, Gao Ding *see* **Gao, Li[2], 2003m:11131**
Schalm, Koenraad *see* **Huiszoon, L. R. et al., 2003a:81177**
Schellekens, A. N. *see* **Huiszoon, L. R. et al., 2003a:81177**
Schinzel, A. An extension of some formulae of Lerch. (English summary) **2003i:11050**
Shiu, Peter *see* **Hall, R. R., 2003a:11005**
Shparlinski, Igor E. On a question of Erdős and Graham. (English summary) **2003i:11144**
Stoimenow, Alexander Mutant links distinguished by degree 3 Gauß sums. (English summary) **2003e:57014**
Thaine, F. On Gaussian periods that are rational integers. **2003j:11131**
Yi, Yuan (*with* Zhang, Wen Peng) On the $2k$-th power mean of Dirichlet L-function with the weight of Gauss sums. (Chinese. English and Chinese summaries) **2003m:11139**
Zaharescu, Alexandru Averages of short exponential sums. II. **2003a:11104**
— *see also* **Cobeli, Cristian, 2003f:11149** *and* **2003m:11088**

Zhang, Wen Peng On a Cochrane sum and its hybrid mean value formula. II. (English summary) **2003j:11044**
— (*with* Deng, Yuping) A hybrid mean value of the inversion of L-functions and general quadratic Gauss sums. (English summary) **2003m:11140**
— *see also* **Yi, Yuan**, **2003m:11139**
Zhimbo, È. K. (*with* Chubarikov, V. N.) On the distribution of arithmetic functions modulo a prime. (Russian. Russian summary) **2003f:11147**
Zinov′ev, V. A. *see* **Helleseth, Tor**, **2003k:11183**

11L07 Estimates on exponential sums

Alzer, Horst (*with* Koumandos, Stamatis) Sharp inequalities for trigonometric sums. (English summary) **2003i:11118**
Bachman, Gennady On exponential sums with multiplicative coefficients. II. **2003m:11128**
Balog, Antal (*with* Ruzsa, Imre Z.) On the exponential sum over r-free integers. (English summary) **2003f:11117**
Banks, William D. (*with* Conflitti, Alessandro; Shparlinski, Igor E.) Character sums over integers with restricted g-ary digits. (English summary) **2003k:11133**
Cochrane, Todd (*with* Pinner, Christopher G.; Rosenhouse, Jason) Bounds on exponential sums and the polynomial Waring problem mod p. (English summary) **2003m:11129**
Conflitti, Alessandro *see* **Banks, William D. et al.**, **2003k:11133**
Denef, Jan (*with* Sperber, S.) Exponential sums mod p^n and Newton polyhedra. (English summary) **2003b:11080**
El Mahassni, Edwin (*with* Shparlinski, Igor E.) On the uniformity of distribution of the elliptic curve ElGamal signature. (English summary) **2003h:11094**
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11L10 Jacobsthal and Brewer sums; other complete character sums

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11L15 Weyl sums

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11L26 Sums over arbitrary intervals

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11L40 Estimates on character sums

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11Mxx Zeta and L-functions: analytic theory

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11M06 $\zeta(s)$ and $L(s,\chi)$

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Vinson, Jade P. Partial sums of $\zeta(\frac{1}{2})$ modulo 1. (English summary) **2003i:11124**
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11M20 Real zeros of $L(s,\chi)$; results on $L(1,\chi)$

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Egami, Shigeki On a twisted power mean of $L(1,\chi)$. (English summary) **2003d:11128**
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Ji, Chun Gang (*with* Jiao, Rong Zheng) On the Siegel-Tatuzawa theorem. (Chinese. English and Chinese summaries) **2003h:11105**
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Louboutin, Stéphane R. Explicit upper bounds for $|L(1,\chi)|$ for primitive even Dirichlet characters. **2003b:11089**
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11N37 Asymptotic results on arithmetic functions

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11N56 Rate of growth of arithmetic functions

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11N60 Distribution functions associated with additive and positive multiplicative functions

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11N64 Other results on the distribution of values or the characterization of arithmetic functions

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11N69 Distribution of integers in special residue classes

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Cobeli, Cristian (*with* Zaharescu, Alexandru) The order of inverses mod q. (English summary) **2003f:11149**
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11N80 Generalized primes and integers

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11N99 None of the above, but in this section

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11Pxx Additive number theory; partitions

11P05 Waring's problem and variants

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— (*with* Kawada, Koichi; Wooley, Trevor D.) Additive representation in thin sequences. VI. Representing primes, and related problems. (English summary) **2003k:11145**
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11P21 Lattice points in specified regions

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Henk, Martin Successive minima and lattice points. (English summary) **2003m:11164**
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11P32 Goldbach-type theorems; other additive questions involving primes

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11P55 Applications of the Hardy-Littlewood method [see also 11D85]

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— (*with* Kawada, Koichi) Ternary problems in additive prime number theory. (English summary) **2003b:11103**
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11P70 Inverse problems of additive number theory

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11P81 Elementary theory of partitions [see also 05A17]

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Jing, Naihuan (*with* Misra, Kailash C.; Savage, Carla D.) On multi-color partitions and the generalized Rogers-Ramanujan identities. (English summary) **2003b:11106**
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— *see also* **Alladi, Krishnaswami, 2003f:11161**
Ciucu, Mihai (*with* Krattenthaler, Christian F.) Plane partitions. II. $5\frac{1}{2}$ symmetry classes. (English summary) **2003d:05018**
Garvan, Frank G. Shifted and shiftless partition identities. **2003m:11173**
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Manivel, Laurent *see* **Bacher, Roland, 2003c:05020**
Paule, Peter *see* **Berkovich, Alexander, 2003b:11111** *and* **Andrews, George E. et al., 2003d:33045**
Prodinger, Helmut *see* **Andrews, George E. et al., 2003d:33045**
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Shonhiwa, Temba On relatively prime decompositions and related results. (English summary) **2003b:11004**
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Yee, Ae Ja A combinatorial proof of Andrews' partition functions related to Schur's partition theorem. (English summary) **2003a:05017**

11P82 Analytic theory of partitions

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Berkovich, Alexander (*with* Paule, Peter) Variants of the Andrews-Gordon identities. (English summary) **2003b:11111**
Chan, Heng Huat (*with* Hahn, Heekyoung; Lewis, Richard P.; Tan, Siew Lian) New Ramanujan-Kolbert type partition identities. (English summary) **2003k:11154**
Chen, Wen Li The lower bound of the partition function $p(n)$. (Chinese. English and Chinese summaries)
Davidson, Morley Partition polynomials and their zeros. (English summary) **2003c:11134**
— Partition polynomials: zero distribution problems. **2003m:11172**
— On the Farey series and outer zeros of partition polynomials. **2003b:11112**
— (*with* Gagola, Stephen M., Jr.) On Rademacher's conjecture and a recurrence relation of Euler. (English summary) **2003g:11116**
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Lewis, Richard P. *see* **Andrews, George E. et al., 2003j:11124** *and* **Chan, Heng Huat et al., 2003k:11154**
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Andrica, Dorin (*with* Tomescu, Ioan) On an integer sequence related to a product of trigonometric functions, and its combinatorial relevance. (English summary) **2003j:05005**
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Berkovich, Alexander (*with* Paule, Peter) Lattice paths, q-multinomials and two variants of the Andrews-Gordon identities. (English summary) **2003f:11024**
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Kra, Irwin *see* **Farkas, Hershel M., 2003a:11045**
Nicolas, Jean-Louis *see* **Ben saïd, F., 2003g:11118**
Paule, Peter *see* **Andrews, George E. et al., 2003d:05007** *and* **Berkovich, Alexander, 2003f:11024**
Penniston, David The p^a-regular partition function modulo p^l. (English summary) **2003e:11112**
Riese, Axel *see* **Andrews, George E. et al., 2003d:05007**
Tomescu, Ioan *see* **Andrica, Dorin, 2003j:05005**
Vershik, A. M. Limit forms of generic geometric configurations and their applications. (Russian. English and Russian summaries) **2003a:11162**

11P83 Partitions; congruences and congruential restrictions

Alladi, Krishnaswami (*with* Berkovich, Alexander) A double bounded version of Schur's partition theorem. (English summary) **2003f:11161**
— (*with* Berkovich, Alexander) New weighted Rogers-Ramanujan partition theorems and their implications. (English summary) **2003b:11114**
Ben saïd, F. (*with* Nicolas, Jean-Louis) Even partition functions. (English summary) **2003g:11118**
— On a conjecture of Nicolas-Sárközy about partitions. (English summary) **2003h:11128**
Berkovich, Alexander *see* **Alladi, Krishnaswami, 2003b:11114** *and* **2003f:11161**
Bonciocat, Nicolae Ciprian Congruences for the convolution of divisor sum function. (English summary) **2003e:11111**
Garvan, Frank G. Shifted and shiftless partition identities. **2003m:11173**
Lovejoy, Jeremy (*with* Ono, Ken) Extension of Ramanujan's congruences for the partition function modulo powers of 5. **2003c:11136**
— The number of partitions into distinct parts modulo powers of 5. (English summary) **2003g:11119**
Nicolas, Jean-Louis *see* **Ben saïd, F., 2003g:11118**
Ono, Ken (*with* Penniston, David) The 2-adic behavior of the number of partitions into distinct parts. (English summary) **2003c:11137a**
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— *see also* **Lovejoy, Jeremy, 2003c:11136**
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Robbins, Neville On t-core partitions and quadratic forms. (English summary) **2003j:11126**
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Eichhorn, Dennis (*with* Sellers, James A.) Computational proofs of congruences for 2-colored Frobenius partitions. (English summary) **2003b:05015**
Farkas, Hershel M. (*with* Kra, Irwin) ★ Theta constants, Riemann surfaces and the modular group. (English summary) **2003a:11045**
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Padmavathamma (*with* Ruby Salestina, M.) On a conjecture of Andrews. II. (English summary) **2003k:05010**
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Santos, José Plínio De O. (*with* Sills, Andrew V.) q-Pell sequences and two identities of V. A. Lebesgue. (English summary) **2003g:05016**
Sellers, James A. *see* **Eichhorn, Dennis, 2003b:05015**
Semikhatov, A. M. (*with* Tipunin, I. Yu.; Feĭgin, B. L.) Semi-infinite realization of unitary representations of the $N = 2$ algebra, and related constructions. (Russian. Russian summary) **2003b:17035**
Sills, Andrew V. *see* **Santos, José Plínio De O., 2003g:05016**
Subbarao, M. V. (*with* Verma, Arun[1]) Some remarks on a product expansion. An unexplored partition function. (English summary) **2003b:11110**
Tipunin, I. Yu. *see* **Semikhatov, A. M. et al., 2003b:17035**
Verma, Arun[1] *see* **Subbarao, M. V., 2003b:11110**

11P99 None of the above, but in this section

Items with secondary classifications in 11P99

Vu, Van H. Chernoff type bounds for sums of dependent random variables and applications in additive number theory. **2003k:11131**

11Rxx Algebraic number theory: global fields {For complex multiplication, see 11G15.}

11R04 Algebraic numbers; rings of algebraic integers

Bombieri, Enrico (*with* Zannier, Umberto) A note on heights in certain infinite extensions of $\mathbb{Q}$. (English and Italian summaries) **2003d:11155**
Brunotte, Horst Characterization of CNS trinomials. (English summary) **2003k:11157**
Dąbrowska, Anna Diagonalizing the trace form in some number fields. (English summary) **2003a:11134**
Dubickas, Artūras On heights of polynomials with real roots. (English summary) **2003h:11129**
— On numbers which are differences of two conjugates of an algebraic integer. (English summary) **2003h:11130**
— Mahler measures close to an integer. (English summary) **2003d:11156**
— Additive relations with conjugate algebraic numbers. **2003i:11151**
Ichimura, Humio Note on the ring of integers of a Kummer extension of prime degree. V. (English summary) **2003g:11120**
Jeon, Hyeong-Gon Expressions for infinite products. (English summary) **2003f:11162**
Kovács, Attila On canonical expansions of integers in imaginary quadratic fields. (English summary) **2003f:11163**
Motoda, Yasuo (*with* Nakahara, Toru; Shah, Syed Inayat Ali) On a problem of Hasse for certain imaginary abelian fields. (English summary) **2003h:11131**
Nakahara, Toru *see* **Motoda, Yasuo et al., 2003h:11131**
Oka, Satomi On the common divisor of discriminants of integers. (English summary) **2003d:11157**
Pezda, T. On cycles and orbits of polynomial mappings $\mathbf{Z}^2 \mapsto \mathbf{Z}^2$. **2003m:11174**
Shah, Syed Inayat Ali *see* **Motoda, Yasuo et al., 2003h:11131**
Shastri, Parvati Integral points on the circle $X^2 + Y^2 = c$. **2003k:11158**
Simon, Denis The index of nonmonic polynomials. (English summary) **2003f:11164**
Slavut·skiĭ, I. Sh. A real quadratic field and the Ankeny-Artin-Chowla conjecture. (Russian. Russian summary) **2003h:11132**
Soverchia, Elena Relative integral bases over a Hilbert class field. (English summary) **2003i:11152**
Srinivas Rau, S. (*with* Uma, B.) Squarefree ideals and an assertion of Ramanujan. (English summary) **2003i:11153**
Uma, B. *see* **Srinivas Rau, S., 2003i:11153**
Zannier, Umberto *see* **Bombieri, Enrico, 2003d:11155**

Items with secondary classifications in 11R04

Chang, Mu-Ling Non-monogeneity in a family of sextic fields. (English summary) **2003i:11158**
Coykendall, Jim Elasticity properties preserved in the normset. (English summary) **2003d:11159**
Divišová, Zuzana On cycles of polynomials with integral rational coefficients. (English summary) **2003k:11037**
Gaál, István (*with* Olajos, Péter; Pohst, Michael) Power integral bases in orders of composite fields. (English summary) **2003k:11047**
Kubota, Tomio (*with* Oka, Satomi) On the unramified common divisor of the discriminants of integers. (Japanese. English summary) **2003f:11170**
Nakahara, Toru *see* **Shah, Syed Inayat Ali, 2003e:11115** *and* **2003k:11165**
Oka, Satomi *see* **Kubota, Tomio, 2003f:11170**
Olajos, Péter *see* **Gaál, István et al., 2003k:11047**
Picavet-L'Hermitte, Martine Root closure in algebraic orders. (English summary) **2003e:13034**
Pohst, Michael *see* **Gaál, István et al., 2003k:11047**
Shah, Syed Inayat Ali (*with* Nakahara, Toru) Monogenesis of the rings of integers in certain imaginary abelian fields. (English summary) **2003k:11165**
— (*with* Nakahara, Toru) A prototype of certain abelian fields whose rings of integers have a power basis. (English summary) **2003e:11115**
Smith, David Andrew Gröbner bases in orders of algebraic number fields. (English summary) **2003c:13023**
Somodi, Marius Linear forms and arithmetic equivalence. **2003k:11170**
Soverchia, Elena Steinitz classes of metacyclic extensions. (English summary) **2003e:11116**

11R06 PV-numbers and generalizations; other special algebraic numbers

Bassino, Frédérique Beta-expansions for cubic Pisot numbers. (English summary) **2003m:11175**
Borwein, Peter B. (*with* Hare, Kevin G.) Some computations on the spectra of Pisot and Salem numbers. (English summary) **2003a:11135**

— (*with* Hare, Kevin G.) General forms for minimal spectral values for a class of quadratic Pisot numbers. (English summary) **2003i:11154**

Dubickas, Artūras (*with* Smyth, Chris J.) On the Remak height, the Mahler measure and conjugate sets of algebraic numbers lying on two circles. (English summary) **2003a:11136**

— The Remak height for units. (English summary) **2003k:11159**

— Integer parts of powers of Pisot and Salem numbers. (English summary) **2003j:11129**

Feng, De-Jun (*with* Wen, Zhi Ying) A property of Pisot numbers. (English summary) **2003i:11155**

Hare, Kevin G. *see* **Borwein, Peter B., 2003a:11135** *and* **2003i:11154**

Rumely, Robert The Fekete-Szegő theorem with splitting conditions. II. **2003f:11165**

Smyth, Chris J. *see* **Dubickas, Artūras, 2003a:11136**

Wen, Zhi Ying *see* **Feng, De-Jun, 2003i:11155**

Zaimi, T. On an approximation property of Pisot numbers. (English summary) **2003g:11121**

Items with secondary classifications in 11R06

Bartholdi, Laurent (*with* Ceccherini-Silberstein, Tullio G.) Salem numbers and growth series of some hyperbolic graphs. (English summary) **2003b:20060**

Bugeaud, Yann Sur la suite des nombres de la forme $q^{n_1}+\cdots+q^{n_k}$. (English summary) [The sequence of numbers of the form $q^{n_1}+\cdots+q^{n_k}$] **2003d:11031**

Ceccherini-Silberstein, Tullio G. *see* **Bartholdi, Laurent, 2003b:20060**

Danzer, Ludwig (*with* van Ophuysen, Gerrit) A species of planar triangular tilings with inflation factor $\sqrt{-\tau}$. (English summary) **2003f:52015**

Dubickas, Artūras On heights of polynomials with real roots. (English summary) **2003h:11129**

— Mahler measures close to an integer. (English summary) **2003d:11156**

Frougny, Christiane (*with* Sakarovitch, Jacques) Two groups associated with quadratic Pisot units. (English and French summaries) **2003k:20098**

Hironaka, Eriko Erratum: "The Lehmer polynomial and pretzel links" [Canad. Math. Bull. **44** (2001), no. 4, 440–451; MR 2002g:57009]. (English summary) **2003c:57007**

Hua, Su (*with* Rao, Hui) Graph-directed structures of self-similar sets with overlaps. (English summary) **2003g:11087**

Lalande, Franck Réalisation de produits en couronne comme groupe de Galois de polynômes réciproques et construction de polynômes génériques. [Construction of wreath products as Galois groups of reciprocal polynomials and construction of generic polynomials] **2003f:12005**

Luo, Jun[1] A note on a self-similar tiling generated by the minimal Pisot number. (English summary) **2003g:37019**

(Oesterlé, Joseph) *see* **Lalande, Franck, 2003f:12005**

van Ophuysen, Gerrit *see* **Danzer, Ludwig, 2003f:52015**

Rao, Hui *see* **Hua, Su, 2003g:11087**

Sakarovitch, Jacques *see* **Frougny, Christiane, 2003k:20098**

Sano, Yuki On purely periodic beta-expansions of Pisot numbers. (English summary) **2003c:11085**

11R09 Polynomials (irreducibility, etc.)

Byeon, Dongho (*with* Stark, H. M.) On the finiteness of certain Rabinowitsch polynomials. II. (English summary) **2003m:11176**

Chern, Shey-Jey (*with* Vaaler, Jeffrey D.) The distribution of values of Mahler's measure. (English summary) **2003a:11137**

Dubickas, Artūras (*with* Smyth, Chris J.) The Lehmer constants of an annulus. (English and French summaries) **2003b:11116**

— Polynomials with many factors in cyclotomic extensions. (English and Lithuanian summaries) **2003k:11160**

Filaseta, Michael (*with* Trifonov, Ognian) The irreducibility of the Bessel polynomials. (English summary) **2003g:11122**

Kostra, Juraj On orbits in ambiguous ideals. (English summary) **2003k:11161**

Rodriguez-Villegas, Fernando Identities between Mahler measures. **2003m:11177**

Smyth, Chris J. *see* **Dubickas, Artūras, 2003b:11116**

Stark, H. M. *see* **Byeon, Dongho, 2003m:11176**

Trifonov, Ognian *see* **Filaseta, Michael, 2003g:11122**

Vaaler, Jeffrey D. *see* **Chern, Shey-Jey, 2003a:11137**

Items with secondary classifications in 11R09

Boyd, David W. (*with* Rodriguez-Villegas, Fernando) Mahler's measure and the dilogarithm. I. (English summary) **2003d:11095**

Brunotte, Horst Characterization of CNS trinomials. (English summary) **2003k:11157**

Byeon, Dongho (*with* Stark, H. M.) On the finiteness of certain Rabinowitsch polynomials. (English summary) **2003d:11161**

Cipu, Mihai (*with* Luca, Florian) On the Galois group of the generalized Fibonacci polynomial. **2003k:12005**

Dubickas, Artūras The Remak height for units. (English summary) **2003k:11159**

— Mahler measures close to an integer. (English summary) **2003d:11156**

Filaseta, Michael Coverings of the integers associated with an irreducibility theorem of A. Schinzel. **2003k:11015**

— (*with* Lam, T. Y.) On the irreducibility of the generalized Laguerre polynomials. **2003m:11046**

Kihel, Omar Extensions diédrales et courbes elliptiques. [Dihedral extensions and elliptic curves] **2003f:11077**

Lam, T. Y. *see* **Filaseta, Michael, 2003m:11046**

Luca, Florian *see* **Cipu, Mihai, 2003k:12005**

Rodriguez-Villegas, Fernando *see* **Boyd, David W., 2003d:11095**

Stark, H. M. *see* **Byeon, Dongho, 2003d:11161**

Wang, Rui[2] A criterion for irreducible polynomials over **Q**. (Chinese. English and Chinese summaries) **2003k:11038**

Wood, Melanie *P*-orderings: a metric viewpoint and the non-existence of simultaneous orderings. (English summary) **2003k:13022**

11R11 Quadratic extensions

Bapoungué, Lionel Factorisation dans un ordre non maximal d'un corps quadratique. (English and French summaries) [Factorization in a nonmaximal order of a quadratic field] **2003a:11138**

Biró, András Yokoi's conjecture. **2003k:11162**

Byeon, Dongho A note on the existence of certain infinite families of imaginary quadratic fields. (English summary) **2003i:11156**

Cohen, Joseph (*with* Sonn, Jack) On the Ono invariants of imaginary quadratic fields. (English summary) **2003g:11123**

Gica, Alexandru A conjecture which implies the theorem of Gauss-Heegner-Stark-Baker. (English summary) **2003c:11138**

— The proof of a conjecture of additive number theory. (English summary) **2003e:11113**

Jacobson, Michael J., Jr. (*with* Williams, Hugh C.) Modular arithmetic on elements of small norm in quadratic fields. (English summary) **2003g:11124**

Komatsu, Toru An infinite family of pairs of quadratic fields $\mathbb{Q}(\sqrt{D})$ and $\mathbb{Q}(\sqrt{mD})$ whose class numbers are both divisible by 3. **2003f:11166**

Mollin, R. A. Polynomials of Pellian type and continued fractions. (English summary) **2003c:11139**

— New prime-producing quadratic polynomials associated with class number one or two. (English summary) **2003h:11133**

Sonn, Jack *see* **Cohen, Joseph, 2003g:11123**

Williams, Hugh C. *see* **Jacobson, Michael J., Jr., 2003g:11124**

Items with secondary classifications in 11R11

Baeza, Ricardo (*with* Coulangeon, Renaud; Icaza, Maria Ines; O'Ryan, Manuel) Hermite's constant for quadratic number fields. (English summary) **2003a:11084**

Brown, Alexander F. (*with* Ghate, Eknath P.) Dihedral congruence primes and class fields of real quadratic fields. (English summary) **2003g:11130**

Bülow, Thomas Power residue criteria for quadratic units and the negative Pell equation. (English summary) **2003m:11181**

Byeon, Dongho Existence of certain fundamental discriminants and class numbers of real quadratic fields. **2003k:11169**

Chakraborty, Kalyan (*with* Murty, Maruti Ram) On the number of real quadratic fields with class number divisible by 3. (English summary) **2003m:11184**

Cheng, Kell Hiu Fai *see* **Mollin, R. A. et al., 2003f:11011** *and* **2003i:11017**

Coulangeon, Renaud *see* **Baeza, Ricardo et al., 2003a:11084**

Cutter, Pamela (*with* Granville, Andrew; Tucker, Thomas J.) The number of fields generated by the square root of values of a given polynomial. (English summary) **2003j:11109**

Dąbrowska, Anna Diagonalizing the trace form in some number fields. (English summary) **2003a:11134**

Feng, Ke Qin *see* **Liu, Fengmei et al., 2003e:11121**

Ghate, Eknath P. *see* **Brown, Alexander F., 2003g:11130**

Goddard, B. *see* **Mollin, R. A. et al., 2003i:11017**

Granville, Andrew *see* **Cutter, Pamela et al., 2003j:11109**

Guo, Xue Jun (*with* Song, Guang Tian) A remark on computing the tame kernel of quadratic imaginary fields. (English summary) **2003i:11172**

Icaza, Maria Ines *see* **Baeza, Ricardo et al., 2003a:11084**

Jacobson, Michael J., Jr. (*with* Williams, Hugh C.) New quadratic polynomials with high densities of prime values. (English summary) **2003k:11146**

Karoubi, Max (*with* Lambre, Thierry) Quelques classes caractéristiques en théorie des nombres. (English summary) [Some characteristic classes in number theory] **2003f:11178**

Kawamoto, F. (*with* Odai, Y.) Normal integral bases of ∞-ramified abelian extensions of totally real number fields. (English summary) **2003m:11189**

Kovács, Attila On canonical expansions of integers in imaginary quadratic fields. (English summary) **2003f:11163**

Lambre, Thierry *see* **Karoubi, Max, 2003f:11178**

Le, Mao Hua Divisibility of the class numbers of the imaginary quadratic fields $Q(\sqrt{a^2-4k^n})$. (Chinese. English and Chinese summaries)

Liu, Fengmei (*with* Ma, Zhi; Feng, Ke Qin) New results on non-existence of generalized bent functions. II. (English summary) **2003e:11121**

Louboutin, Stéphane R. Computation of class numbers of quadratic number fields. (English summary) **2003i:11163**

Ma, Zhi *see* **Liu, Fengmei et al., 2003e:11121**

Matsumoto, Kohji Double gamma functions and certain real quadratic fields. (Japanese)

Mollin, R. A. All solutions of the Diophantine equation $x^2-Dy^2=n$. (English summary) **2003b:11021**

— Criteria for simultaneous solutions of $X^2-DY^2=c$ and $x^2-Dy^2=-c$. (English summary) **2003k:11041**

— (*with* Cheng, Kell Hiu Fai) Beepers, creepers, and sleepers. (English summary) **2003f:11011**

— (*with* Cheng, Kell Hiu Fai; Goddard, B.) Pellian polynomials and period lengths of continued fractions. (English summary) **2003i:11017**

Murty, Maruti Ram *see* **Chakraborty, Kalyan, 2003m:11184**

Odai, Y. *see* **Kawamoto, F., 2003m:11189**

O'Ryan, Manuel *see* **Baeza, Ricardo et al., 2003a:11084**

van der Poorten, Alfred J. (*with* te Riele, H. J. J.; Williams, Hugh C.) Corrigenda and addition to: "Computer verification of the Ankeny-Artin-Chowla conjecture for all primes less than 100 000 000 000" [Math. Comp. **70** (2001), no. 235, 1311–1328; MR 2001j:11125]. (English summary) **2003h:11162**

te Riele, H. J. J. *see* **van der Poorten, Alfred J. et al., 2003h:11162**

Sairaiji, Fumio (*with* Shimizu, Kenichi) An inequality between class numbers and Ono's numbers associated to imaginary quadratic fields. (English summary) **2003f:11171**

Shimizu, Kenichi *see* **Sairaiji, Fumio, 2003f:11171**

Slavut·skiĭ, I. Sh. A real quadratic field and the Ankeny-Artin-Chowla conjecture. (Russian. Russian summary) **2003h:11132**

Song, Guang Tian *see* **Guo, Xue Jun, 2003i:11172**

Srinivas Rau, S. (*with* Uma, B.) Squarefree ideals and an assertion of Ramanujan. (English summary) **2003i:11153**

Thuswaldner, Jörg M. Fractals and number systems in real quadratic number fields. (English summary) **2003c:11091**
Tomita, Koshi (*with* Yamamuro, Kouji) Lower bounds for fundamental units of real quadratic fields. (English summary) **2003c:11145**
Tucker, Thomas J. *see* **Cutter, Pamela et al., 2003j:11109**
Uma, B. *see* **Srinivas Rau, S., 2003i:11153**
Vollmer, Ulrich Asymptotically fast discrete logarithms in quadratic number fields. (English summary) **2003b:11135**
Weng, Annegret Constructing hyperelliptic curves of genus 2 suitable for cryptography. (English summary) **2003i:14029**
Williams, Hugh C. *see* **van der Poorten, Alfred J. et al., 2003h:11162** *and* **Jacobson, Michael J., Jr., 2003k:11146**
Wood, Melanie P-orderings: a metric viewpoint and the non-existence of simultaneous orderings. (English summary) **2003k:13022**
Yamamuro, Kouji *see* **Tomita, Koshi, 2003c:11145**
Yu, Gang[1] A note on the divisibility of class numbers of real quadratic fields. (English summary) **2003m:11187**

11R16 Cubic and quartic extensions

Azizi, Abdelmalek (*with* Benhamza, Ikram) Détermination des corps $K = \mathbf{Q}(\sqrt{d}, \sqrt{-2})$ dont les 2-groupes de classes sont de type $(2, 2)$. (French summary) [Determining fields $K = \mathbf{Q}(\sqrt{d}, \sqrt{-2})$ whose class 2-groups are of type $(2, 2)$] **2003e:11114**
Benhamza, Ikram *see* **Azizi, Abdelmalek, 2003e:11114**
Cohen, Henri (*with* Diaz y Diaz, Francisco; Olivier, Michel Jacques) Enumerating quartic dihedral extensions of $\mathbf{Q}$. (English summary) **2003f:11167**
Diaz y Diaz, Francisco *see* **Cohen, Henri et al., 2003f:11167**
Diviš ová, Zuzana (*with* Kostra, Juraj; Pomp, M.) On transformation matrices connected to normal bases in cubic fields. (English summary) **2003m:11178**
Grundman, Helen G. (*with* Leep, David B.; Smith, Tara L.) $\mathbf{Q}$-adequacy of Galois 2-extensions. (English summary) **2003d:11158**
Komatsu, Toru On unramified cyclic cubic extensions of real quadratic fields. **2003b:11117**
Kostra, Juraj *see* **Diviš ová, Zuzana et al., 2003m:11178**
Leep, David B. *see* **Grundman, Helen G. et al., 2003d:11158**
Olivier, Michel Jacques *see* **Cohen, Henri et al., 2003f:11167**
Pomp, M. *see* **Diviš ová, Zuzana et al., 2003m:11178**
Smith, Tara L. *see* **Grundman, Helen G. et al., 2003d:11158**
Spearman, Blair K. (*with* Williams, Kenneth S.) Integers which are discriminants of bicyclic or cyclic quartic fields. (English summary) **2003c:11140**
Williams, Kenneth S. *see* **Spearman, Blair K., 2003c:11140**

Items with secondary classifications in 11R16

Cohen, Henri Constructing and counting number fields. (English summary) **2003m:11186**
Deitmar, Anton Class numbers of orders in cubic fields. (English summary) **2003i:11171**
Dubickas, Artūras On numbers which are differences of two conjugates of an algebraic integer. (English summary) **2003h:11130**
El Mesaoudi, R. *see* **Ismaili, M. C., 2003e:11120**
Ismaili, M. C. (*with* El Mesaoudi, R.) Sur la divisibilité exacte par 3 du nombre de classes de certains corps cubiques purs. (English and French summaries) [Exact divisibility by 3 of the class number of some pure cubic fields] **2003e:11120**
Katayama, Shin-ichi (*with* Levesque, Claude; Nakahara, Toru) On the unit group and the class number of certain composita of two real quadratic fields. (English summary) **2003d:11160**
Kawamoto, F. (*with* Odai, Y.) Normal integral bases of ∞-ramified abelian extensions of totally real number fields. (English summary) **2003m:11189**
Kim, Hyun Kwang (*with* Kim, Jung Soo) Evaluation of zeta function of the simplest cubic field at negative odd integers. (English summary) **2003h:11143**
Kim, Jung Soo *see* **Kim, Hyun Kwang, 2003h:11143**
Levesque, Claude *see* **Katayama, Shin-ichi et al., 2003d:11160**
Nakahara, Toru *see* **Katayama, Shin-ichi et al., 2003d:11160**
Odai, Y. *see* **Kawamoto, F., 2003m:11189**

11R18 Cyclotomic extensions

Croot, Ernest S., III (*with* Granville, Andrew) Unit fractions and the class number of a cyclotomic field. (English summary) **2003g:11125**
Dantas Lopes, José Othon *see* **Pires da Nóbrega Neto, Trajano et al., 2003h:11134**
Dvornicich, Roberto (*with* Zannier, Umberto) Sums of roots of unity vanishing modulo a prime. (English summary) **2003i:11157**
Gao, En Wei (*with* Zhang, Jin Xia) Decomposition of the prime ideal (p) in $\mathbf{Q}(\mu^{\frac{1}{n}})$. (Chinese. English and Chinese summaries)
Granville, Andrew *see* **Croot, Ernest S., III, 2003g:11125**
Helou, Charles A reciprocity relation between some cyclotomic integers. **2003k:11163**
— On the Hilbert symbol in cyclotomic fields. **2003m:11179**
Interlando, J. Carmelo *see* **Pires da Nóbrega Neto, Trajano et al., 2003h:11134**
Kolyvagin, V. A. On the first case of the Fermat theorem for cyclotomic fields. **2003f:11168**
Nagaraj, D. S. Higher circular l-units of Anderson and Ihara. **2003k:11164**
Nakahara, Toru *see* **Shah, Syed Inayat Ali, 2003e:11115** *and* **2003k:11165**
Ouyang, Yi The universal norm distribution and Sinnott's index formula. (English summary) **2003j:11130**
Pires da Nóbrega Neto, Trajano (*with* Interlando, J. Carmelo; Dantas Lopes, José Othon) On computing discriminants of subfields of $\mathbf{Q}(\zeta_{p^r})$. (English summary) **2003h:11134**
Shah, Syed Inayat Ali (*with* Nakahara, Toru) Monogenesis of the rings of integers in certain imaginary abelian fields. (English summary) **2003k:11165**
— (*with* Nakahara, Toru) A prototype of certain abelian fields whose rings of integers have a power basis. (English summary) **2003e:11115**
Thaine, F. Jacobi sums and new families of irreducible polynomials of Gaussian periods. (English summary) **2003c:11141**
— On Gaussian periods that are rational integers. **2003j:11131**
Vavroš, Michal A note on polynomial cycles. (English summary) **2003j:11132**
Zannier, Umberto *see* **Dvornicich, Roberto, 2003i:11157**
Zhang, Jin Xia *see* **Gao, En Wei**

Items with secondary classifications in 11R18

Bugeaud, Yann (*with* Hanrot, Guillaume) Un nouveau critère pour l'équation de Catalan. (English and French summaries) [A new criterion for the Catalan equation] **2003h:11039**
Conrad, Marc (*with* Replogle, Daniel R.) Nontrivial Galois module structure of cyclotomic fields. (English summary) **2003k:11171**
Dubickas, Artūras Polynomials with many factors in cyclotomic extensions. (English and Lithuanian summaries) **2003k:11160**
Frey, Gerhard Der Satz von Preda Mihăilescu: die Vermutung von Catalan ist richtig! [The theorem of Preda Mihăilescu: Catalan's conjecture is correct!] **2003j:11034**
Girstmair, Kurt Generalized Dedekind sums, correlation of L-series, and the Galois module of $\cot(\pi/N)\cot(m\pi/N)$. **2003k:11064**
Greither, C. (*with* Kučera, Radan) The lifted root number conjecture for fields of prime degree over the rationals: an approach via trees and Euler systems. (English and French summaries) **2003e:11123**
Hanrot, Guillaume *see* **Bugeaud, Yann, 2003h:11039**
Ihara, Yasutaka Some arithmetic aspects of Galois actions in the pro-p fundamental group of $\mathbb{P}^1 - \{0, 1, \infty\}$. **2003k:14024**
Kučera, Radan *see* **Greither, C., 2003e:11123**
Replogle, Daniel R. *see* **Conrad, Marc, 2003k:11171**
Sitaraman, Sankar Note on a Fermat-type Diophantine equation. (English summary) **2003k:11044**
Thangadurai, R. A note on a conjecture of Borwein and Choi. (English summary) **2003h:11154**

11R20 Other abelian and metabelian extensions

Anderson, Greg W. Kronecker-Weber plus epsilon. (English summary) **2003h:11135**
Godin, Marjory (*with* Sodaïgui, Bouchaïb) Classes de Steinitz d'extensions à groupe de Galois A_4. (English and French summaries) [Steinitz classes of extensions with Galois group A_4] **2003h:11136**
Hirabayashi, Mikihito Inkeri's determinant for an imaginary abelian number field. (English summary) **2003j:11133**
Sodaïgui, Bouchaïb *see* **Godin, Marjory, 2003h:11136**
Soverchia, Elena Steinitz classes of metacyclic extensions. (English summary) **2003e:11116**
Vinatier, Stéphane Une famille infinie d'extensions faiblement ramifiées. (English summary) [An infinite family of weakly ramified extensions] **2003e:11117**

Items with secondary classifications in 11R20

Chen, Yen-Mei J. (*with* Yu, Jing) On a density problem for elliptic curves over finite fields. (English summary) **2003a:11071**
Hasebe, Hiroyuki On unramified Galois extensions constructed using Galois representations. (English summary) **2003i:11159**
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11R23 Iwasawa theory

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11R29 Class numbers, class groups, discriminants

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11R32 Galois theory

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11R33 Integral representations related to algebraic numbers; Galois module structure of rings of integers [see also 20C10]

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— (*with* Sumida, Hiroki) A note on integral bases of unramified cyclic extensions of prime degree. II. (English summary) **2003b:11120**
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Kawamoto, F. (*with* Odai, Y.) Normal integral bases of ∞-ramified abelian extensions of totally real number fields. (English summary) **2003m:11189**
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Gaál, István ★ Diophantine equations and power integral bases. (English summary) **2003a:11027**
Hatzaras, Y. (*with* Theohari-Apostolidi, Th.) Involutions on classical crossed products over global fields. (English summary) **2003f:16029**
Snaith, Victor P. ★ Algebraic K-groups as Galois modules. (English summary) **2003c:11149**
Solomon, David On p-adic abelian Stark conjectures at $s = 1$. (English and French summaries) **2003d:11168**
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11R34 Galois cohomology [see also 12Gxx, 16H05, 19A31]

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Greenberg, Ralph Introduction to Iwasawa theory for elliptic curves. **2003a:11067**
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Lannuzel, Arthur Sur le rang d'une extension pro-p-libre d'un corps de nombres. (English summary) [Rank of a free pro-p-extension of a number field] **2003k:11167**
(Lemmermeyer, Franz) *see* **Koch, Helmut, 2003f:11181**
Ouyang, Yi The universal norm distribution and Sinnott's index formula. (English summary) **2003j:11130**
Perrin-Riou, Bernadette Théorie d'Iwasawa des représentations p-adiques semi-stables. (English and French summaries) [Iwasawa theory of semistable p-adic representations] **2003c:11144**
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Weston, Thomas Alexander Selmer groups and Chow groups of self-products of algebraic varieties. **2003h:11069**

11R37 Class field theory

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Benjamin, Elliot On a question of Martinet concerning the 2-class field tower of imaginary quadratic number field. (English and French summaries) **2003h:11141**
Brown, Alexander F. (*with* Ghate, Eknath P.) Dihedral congruence primes and class fields of real quadratic fields. (English summary) **2003g:11130**
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Jaulent, Jean-François Classes logarithmiques des corps totalement réels. [Logarithmic classes of totally real fields] **2003d:11166**
Kurokawa, Nobushige (*with* Müller-Stüler, Eva-Marie; Ochiai, Hiroyuki; Wakayama, Masato) Kronecker's Jugendtraum and ring sine functions. (English summary) **2003h:11142**
Maire, Christian On the $\mathbb{Z}_l$-rank of abelian extensions with restricted ramification. (English summary) **2003b:11122**
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Müller-Stüler, Eva-Marie *see* **Kurokawa, Nobushige et al., 2003h:11142**
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Darmon, Henri Integration on $\mathscr{H}_p \times \mathscr{H}$ and arithmetic applications. (English summary) **2003j:11067**
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Rubin, Karl *see* **Mazur, Barry, 2003k:11095**
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11R39 Langlands-Weil conjectures, nonabelian class field theory [see also 11Fxx, 22E55]

Frenkel, Edward (*with* Gaitsgory, D.; Vilonen, Kari) On the geometric Langlands conjecture. **2003a:11145**
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— *see also* **Ash, Avner et al., 2003g:11055**
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Gelbart, Stephen (*with* Shahidi, Freydoon) Boundedness of automorphic L-functions in vertical strips. **2003a:11056**
Gouvêa, Fernando Q. Deformations of Galois representations. **2003a:11061**
Kim, Henry H. Applications of Langlands' functorial lift of odd orthogonal groups. (English summary) **2003c:22025**
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Murty, Maruti Ram Recent developments in the Langlands program. (French summary) **2003j:11055**
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11R42 Zeta functions and L-functions of number fields [see also 11M41, 19F27]

Francini, Paolo Picard group, zeta functions and Riemann-Roch formula. (English summary) **2003b:11123**
Katayama, Shin-ichi Zeta functions of finite groups and arithmetically equivalent fields. (English summary) **2003k:11175**
Kim, Hyun Kwang (*with* Kim, Jung Soo) Evaluation of zeta function of the simplest cubic field at negative odd integers. (English summary) **2003h:11143**
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Kolster, Manfred Higher relative class number formulae. (English summary) **2003i:11168**
Koyama, Shin-ya *see* **Mishou, Hidehiko, 2003h:11144**
Louboutin, Stéphane R. Explicit upper bounds for residues of Dedekind zeta functions and values of L-functions at $s = 1$, and explicit lower bounds for relative class numbers of CM-fields. (English summary) **2003d:11167**
Matsumoto, Kohji Asymptotic expansions of double gamma-functions and related remarks. (English summary) **2003f:11174**
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Biró, András Yokoi's conjecture. **2003k:11162**
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Boutteaux, Gérard (*with* Louboutin, Stéphane R.) The class number one problem for some non-normal sextic CM-fields. (English summary) **2003c:11146**
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Boyd, David W. (*with* Rodriguez-Villegas, Fernando) Mahler's measure and the dilogarithm. I. (English summary) **2003d:11095**
Bruggeman, Roelof Wichert (*with* Motohashi, Yoichi) A note on the mean value of the zeta and L-functions. XIII. (English summary) **2003d:11125**
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Fouvry, E. (*with* Iwaniec, Henryk) Low-lying zeros of dihedral L-functions. (English summary) **2003k:11139**
Holden, Joshua Comparison of algorithms to calculate quadratic irregularity of prime numbers. (English summary) **2003d:11183**
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Kanemitsu, Shigeru (*with* Sankaranarayanan, Ayyadurai; Tanigawa, Yoshio) A mean value theorem for Dirichlet series and a general divisor problem. (English summary) **2003e:11102**
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Okada, Kaoru Hecke eigenvalues for real quadratic fields. (English summary) **2003k:11078**
Ritter, Jürgen (*with* Weiss, Alfred) Toward equivariant Iwasawa theory. (English summary) **2003i:11161**
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de Smit, Bart Brauer-Kuroda relations for S-class numbers. **2003a:11143**
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11R44 Distribution of prime ideals [see also 11N05]

Items with secondary classifications in 11R44

Enge, Andreas (*with* Stein, Andreas) Smooth ideals in hyperelliptic function fields. (English summary) **2003d:11170**
Somodi, Marius Linear forms and arithmetic equivalence. **2003k:11170**
Stein, Andreas *see* **Enge, Andreas, 2003d:11170**

11R45 Density theorems

Andrīichuk, Vasil' Ī. An analogue of Chebotarev's density theorem for pseudoglobal fields. (Ukrainian. English and Ukrainian summaries) **2003b:11124**
Balog, Antal (*with* Ono, Ken) The Chebotarev density theorem in short intervals and some questions of Serre. **2003h:11145**
Chen, Yen-Mei J. On primitive roots of one-dimensional tori. (English summary) **2003g:11131**
Kitaoka, Yoshiyuki Distribution of units of a cubic field with negative discriminant. (English summary) **2003f:11175**
Ono, Ken *see* **Balog, Antal, 2003h:11145**
Roskam, Hans Artin's primitive root conjecture for quadratic fields. (English and French summaries) **2003j:11142**

Items with secondary classifications in 11R45

Chen, Yen-Mei J. (*with* Yu, Jing) On a density problem for elliptic curves over finite fields. (English summary) **2003a:11071**
— (*with* Kitaoka, Yoshiyuki; Yu, Jing) On primitive roots of tori: the case of function fields. (English summary) **2003k:11176**
Cohen, Henri Constructing and counting number fields. (English summary) **2003m:11186**
— (*with* Diaz y Diaz, Francisco; Olivier, Michel Jacques) Enumerating quartic dihedral extensions of $\mathbb{Q}$. (English summary) **2003f:11167**
Delaunay, Christophe Heuristics on Tate-Shafarevitch groups of elliptic curves defined over $\mathbb{Q}$. (English summary) **2003a:11065**
Diaz y Diaz, Francisco *see* **Cohen, Henri et al., 2003f:11167**
Kable, Anthony C. (*with* Yukie, Akihiko) The mean value of the product of class numbers of paired quadratic fields. I. (English summary) **2003h:11150**
Kitaoka, Yoshiyuki *see* **Chen, Yen-Mei J. et al., 2003k:11176**
Lam, Kwok-Yan (*with* Sica, Francesco) Effective determination of the proportion of split primes in number fields. (English summary) **2003m:11191**
Murray, Brian *see* **Osburn, Robert, 2003m:11195**
Olivier, Michel Jacques *see* **Cohen, Henri et al., 2003f:11167**
Osburn, Robert (*with* Murray, Brian) Tame kernels and further 4-rank densities. (English summary) **2003m:11195**
Sica, Francesco *see* **Lam, Kwok-Yan, 2003m:11191**
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11R47 Other analytic theory [see also 11Nxx]

Lam, Kwok-Yan (*with* Sica, Francesco) Effective determination of the proportion of split primes in number fields. (English summary) **2003m:11191**
Sica, Francesco *see* **Lam, Kwok-Yan, 2003m:11191**

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Bessassi, Sofiène Bounds for the degrees of CM-fields of class number one. **2003m:11183**

Bordellès, Olivier Explicit upper bounds for the average order of $d_n(m)$ and application to class number. (English summary) **2003e:11118**
Deitmar, Anton Class numbers of orders in cubic fields. (English summary) **2003i:11171**
Furuya, Jun On exponential sums involving the ideal counting function in quadratic number fields. (English summary) **2003j:11111**
Kitaoka, Yoshiyuki Distribution of units of a cubic field with negative discriminant. (English summary) **2003f:11175**
Schertz, Reinhard Weber's class invariants revisited. (English and French summaries) **2003j:11139**
Spearman, Blair K. (*with* Williams, Kenneth S.) Integers which are discriminants of bicyclic or cyclic quartic fields. (English summary) **2003c:11140**
Williams, Kenneth S. *see* **Spearman, Blair K., 2003c:11140**
Zannier, Umberto *see* **Amoroso, Francesco, 2003a:11078**

11R52 Quaternion and other division algebras: arithmetic, zeta functions

Items with secondary classifications in 11R52

Hilden, Hugh M. (*with* Lozano Imízcoz, María Teresa; Montesinos-Amilibia, José María) The arithmetic structure of a universal group. (English summary) **2003f:20069**
Jun, Sungtae (*with* Kim, Insuk) Brandt matrices by primitive orders. (English summary) **2003f:11058**
Kim, Insuk *see* **Jun, Sungtae, 2003f:11058**
Kuba, Gerald On the distribution of squares of integral quaternions. II. **2003a:11126**
Lozano Imízcoz, María Teresa *see* **Hilden, Hugh M. et al., 2003f:20069**
Montesinos-Amilibia, José María *see* **Hilden, Hugh M. et al., 2003f:20069**
Rosson, Holly J. Theta series of quaternion algebras over function fields. (English summary) **2003f:11176**
Serhir, A. Niveau hermitien d'une algèbre de quaternions à division munie d'une involution de deuxième espèce. (English summary) [Hermitian level of a quaternion division algebra with involution of the second kind] **2003i:16029**
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11R54 Other algebras and orders, and their zeta and L-functions [see also 11S45, 16H05, 16Kxx]

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Bayer, P. (*with* Travesa i Grau, Artur) Ternary quadratic forms and matrix embeddings of quadratic orders. (Spanish. English and Spanish summaries) **2003e:11039**
Travesa i Grau, Artur *see* **Bayer, P., 2003e:11039**

11R56 Adèle rings and groups

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Dragović, Branko G. *see* **Djordjević, Goran S. et al., 2003d:81156**
Neshveev, S. V. Ergodicity of the action of the positive rationals on the group of finite adeles and the Bost-Connes phase transition theorem. (English summary) **2003d:46092**
Nešić, Ljubiša D. *see* **Djordjević, Goran S. et al., 2003d:81156**
Rumely, Robert The Fekete-Szegő theorem with splitting conditions. II. **2003f:11165**
Thunder, Jeffrey Lin Remarks on adelic geometry of numbers. **2003k:11114**

11R58 Arithmetic theory of algebraic function fields [see also 14–XX]

Ahn, Jaehyun (*with* Jung, Hwanyup) Cyclotomic units and divisibility of the class number of function fields. (English summary) **2003g:11132**
— *see also* **Jung, Hwanyup, 2003h:11146**
Anglès, Bruno (*with* Maire, Christian) A note on tamely ramified towers of global function fields. (English summary) **2003c:11148**
Artin, Emil Quadratische Körper über Polynombereichen Galois'scher Felder und ihre Zetafunktionen. [Quadratic fields over polynomial domains of Galois fields and their zeta functions] **2003i:11169**
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11R60 Cyclotomic function fields (class groups, Bernoulli objects, etc.)

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11R65 Class groups and Picard groups of orders

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11S20 Galois theory

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11S31 Class field theory; p-adic formal groups [see also 14L05]

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11S37 Langlands-Weil conjectures, nonabelian class field theory [see also 11Fxx, 22E50]

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11S70 K-theory of local fields [see also 19Fxx]

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11S90 Prehomogeneous vector spaces

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Kable, Anthony C. (*with* Yukie, Akihiko) The mean value of the product of class numbers of paired quadratic fields. I. (English summary) **2003h:11150**
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Sugiyama, Kazunari b-functions of regular simple prehomogeneous vector spaces. (English summary) **2003m:11205**
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11Txx Finite fields and commutative rings (number-theoretic aspects)

11T06 Polynomials

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Chou, Wun-Seng (*with* Niederreiter, Harald) Monomials and binomials over finite fields as $\mathcal{R}$-orthomorphisms. (English summary) **2003i:11178**
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— (*with* Matthews, Rex W.) On the permutation behaviour of Dickson polynomials of the second kind. (English summary) **2003h:11151**
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Konyagin, Sergei V. (*with* Pappalardi, Francesco) Enumerating permutation polynomials over finite fields by degree. (English summary) **2003h:11153**
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Wang, Luyan On permutation polynomials. **2003e:11135**
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Ballantine, Cristina M. (*with* Roberts, Joel L.) A simple proof of Rolle's theorem for finite fields. **2003b:12003**
Car, Mireille Résidus quadratiques dans $\mathbb{F}_q[T]$. [Quadratic residues in $\mathbb{F}_q[T]$] **2003e:11137**
Cheng, Bo (*with* Mullen, Gary L.) Constructions for mutually orthogonal frequency hyperrectangles with a prescribed type. (English summary) **2003a:05029**
Cohen, Stephen D. (*with* Zhang, Wen Peng) Sums of two exact powers. (English summary) **2003m:11207**
Conflitti, Alessandro On elements of high order in finite fields. (English summary) **2003i:11181**
Deléglise, Marc *see* **Agou, Simon Joseph et al., 2003m:12003**
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Murty, Maruti Ram Prime numbers and irreducible polynomials. **2003a:11020**
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11T22 Cyclotomy

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Chen, Xiao Song An upper bound for the coefficients of cyclotomic polynomials. (Chinese. English and Chinese summaries)
— *see also* **Chen, Xiao Xia**
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Golomb, Solomon W. (*with* Gong, Guang) Hyper-cyclotomic algebra. (English summary) **2003d:11178**
Gong, Guang *see* **Golomb, Solomon W., 2003d:11178**
Katre, S. A. The cyclotomic problem. (English summary) **2003j:11147**
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Kohel, David R. *see* **Ding, Cunsheng et al., 2003i:11081**
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Thaine, F. Jacobi sums and new families of irreducible polynomials of Gaussian periods. (English summary) **2003c:11141**
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van Wamelen, Paul Jacobi sums over finite fields. **2003e:11136**

11T23 Exponential sums

Bassalygo, L. A. (*with* Zinov′ev, V. A.) On polynomials over a finite field of even characteristic with a maximum absolute value of the trigonometric sum. (Russian. Russian summary) **2003k:11181**
Chinen, Koji (*with* Hiramatsu, Toyokazu) Hyper-Kloosterman sums and their applications to the coding theory. (English summary) **2003a:11152**
Férard, Éric Poids des duaux des codes BCH de distance prescrite $2^a + 1$ et sommes exponentielles. (English and French summaries) [Weight of duals of BCH codes of given distance $2^a + 1$ and exponential sums] **2003g:11139**
Hiramatsu, Toyokazu *see* **Chinen, Koji, 2003a:11152**
Katz, Nicholas M. Sato-Tate equidistribution of Kurlberg-Rudnick sums. **2003a:11153**
Kim, Dae San Hodges' Kloosterman sums. (English summary) **2003k:11182**
— Exponential sums for $O^+(2n, q)$ and their applications. (English summary) **2003c:11154**
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Lauder, Alan G. B. (*with* Wan, Daqing) Computing zeta functions of Artin-Schreier curves over finite fields. (English summary) **2003g:11140**
Mills, Donald On the evaluation of Weil sums of Dembowski-Ostrom polynomials. (English summary) **2003a:11154**
Scholten, Jasper (*with* Zhu, Hui June) The first slope case of Wan's conjecture. (English summary) **2003h:11155**
Wan, Daqing *see* **Lauder, Alan G. B., 2003g:11140**
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Coulter, Robert S. The number of rational points of a class of Artin-Schreier curves. (English summary) **2003i:11080**
Danas, George On a characterization of particular types of character and exponential sums. (English summary) **2003f:11115**
— On some particular character and exponential sums. (English summary) **2003b:11077**
El Mahassni, Edwin (*with* Nguyen, Phong Q.; Shparlinski, Igor E.) The insecurity of Nyberg-Rueppel and other DSA-like signature schemes with partially known nonces. (English summary) **2003e:94066**
Férard, Éric Poids des duaux des codes BCH de distance prescrite p^{a_0} et sommes exponentielles. [Weights of duals of BCH codes of given distance p^{a_0} and exponential sums] **2003h:11156**
Hong, Shao-fang Newton polygons for L-functions of exponential sums of polynomials of degree six over finite fields. (English summary) **2003i:11116**
Katz, Nicholas M. Estimates for nonsingular multiplicative character sums. **2003a:11106**
Lenstra, Arjen K. (*with* Shparlinski, Igor E.) On the security of Lenstra's variant of DSA without long inversions. (English summary) **2003i:94045**
Nguyen, Phong Q. *see* **El Mahassni, Edwin et al., 2003e:94066**
Niederreiter, Harald (*with* Shparlinski, Igor E.) Recent advances in the theory of nonlinear pseudorandom number generators. (English summary) **2003k:65005**
Paliogiannis, Fotios C. On a characterization of Kummar sums. (English summary) [On a characterization of Kummer sums] **2003k:11184**
Shparlinski, Igor E. *see* **El Mahassni, Edwin et al., 2003e:94066**; **Lenstra, Arjen K., 2003i:94045** *and* **Niederreiter, Harald, 2003k:65005**

11T24 Other character sums and Gauss sums

Boylan, Matthew Congruences for ${}_2F_1$ hypergeometric functions over finite fields. (English summary) **2003f:11186**
Helleseth, Tor (*with* Zinov′ev, V. A.) New Kloosterman sums identities over $\mathbf{F}_{2^m}$ for all m. (English summary) **2003k:11183**
Niederreiter, Harald (*with* Winterhof, Arne) Incomplete character sums and polynomial interpolation of the discrete logarithm. (English summary) **2003a:11155**
Ono, Ken (*with* Penniston, David) Congruences for ${}_3F_2$ hypergeometric functions over finite fields. (English summary) **2003m:11206**
Paliogiannis, Fotios C. On a characterization of Kummar sums. (English summary) [On a characterization of Kummer sums] **2003k:11184**
Penniston, David *see* **Ono, Ken, 2003m:11206**
Szechtman, Fernando Quadratic Gauss sums over finite commutative rings. **2003c:11155**
van Wamelen, Paul Jacobi sums over finite fields. **2003e:11136**
Winterhof, Arne *see* **Niederreiter, Harald, 2003a:11155**
Zinov′ev, V. A. *see* **Helleseth, Tor, 2003k:11183**

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Ahlgren, Scott Gaussian hypergeometric series and combinatorial congruences. (English summary) **2003i:33025**
Castro, Francis N. On incomplete exponential sums over finite fields. (English summary) **2003b:11081**
Danas, George On a characterization of particular types of character and exponential sums. (English summary) **2003f:11115**
— On some particular character and exponential sums. (English summary) **2003b:11077**
Katre, S. A. The cyclotomic problem. (English summary) **2003j:11147**
Katz, Nicholas M. Sato-Tate equidistribution of Kurlberg-Rudnick sums. **2003a:11153**
— Estimates for nonsingular multiplicative character sums. **2003a:11106**
Kim, Dae San Hodges' Kloosterman sums. (English summary) **2003k:11182**
— Exponential sums for $O(2n + 1, q)$ and their applications. (English summary) **2003d:11179**
Mills, Donald On the evaluation of Weil sums of Dembowski-Ostrom polynomials. (English summary) **2003a:11154**
Zaharescu, Alexandru Almost intersections of curves mod p. (English summary) **2003g:11092**

11T30 Structure theory

Afanas′ev, V. B. (*with* Davydov, Aleksandr A.) Finite field towers: iterated presentation and complexity of arithmetic. (English summary) **2003a:11156**
Allombert, Bill Explicit computation of isomorphisms between finite fields. (English summary) **2003f:11187**
Ballet, Stéphane Quasi-optimal algorithms for multiplication in the extensions of $\mathbb{F}_{16}$ of degree 13, 14 and 15. (English summary) **2003b:11133**
Conflitti, Alessandro On elements of high order in finite fields. (English summary) **2003i:11181**
Couveignes, Jean-Marc Isomorphisms between Artin-Schreier towers. (English summary) **2003a:11157**
Davydov, Aleksandr A. *see* **Afanas′ev, V. B., 2003a:11156**
Kurakin, V. L. Representation of linear recurrence sequences by a trace function. (Russian. Russian summary) **2003k:11185**

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— *see also* **Preface by the editors on the paper: "Quadratic fields over polynomial domains of Galois fields and their zeta functions", 2003b:11001**

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11T55 Arithmetic theory of polynomial rings over finite fields

Adhikari, Sukumar Das (*with* Pappalardi, Francesco) Remarks on the visibility problem in the function field case. (English and French summaries) **2003f:11188**
Car, Mireille Résidus quadratiques dans $\mathbb{F}_q[T]$. [Quadratic residues in $\mathbb{F}_q[T]$] **2003e:11137**
Cohen, Stephen D. (*with* Zhang, Wen Peng) Sums of two exact powers. (English summary) **2003m:11207**
von Haeseler, Fritz (*with* Jürgensen, Wibke) Irreducible polynomials generated by decimations. (English summary) **2003a:11158**
Jürgensen, Wibke *see* **von Haeseler, Fritz, 2003a:11158**
Leone, Manuel A new low complexity parallel multiplier for a class of finite fields. (English summary) **2003k:11186**
Pappalardi, Francesco *see* **Adhikari, Sukumar Das, 2003f:11188**
Zhang, Wen Peng *see* **Cohen, Stephen D., 2003m:11207**

Items with secondary classifications in 11T55

Aïssa, Houda Formes quadratiques sur $\mathbb{F}_q[T]$. (French summary) [Quadratic forms over $\mathbb{F}_q[T]$] **2003d:11056**
Artin, Emil Quadratische Körper über Polynombereichen Galois'scher Felder und ihre Zetafunktionen. [Quadratic fields over polynomial domains of Galois fields and their zeta functions] **2003i:11169**
— *see also* **Preface by the editors on the paper: "Quadratic fields over polynomial domains of Galois fields and their zeta functions", 2003b:11001**
Bini, Gilberto (*with* Flamini, Flaminio) ★ Finite commutative rings and their applications. (English summary) **2003m:13022**
Caragiu, Mihai Multivariate interpolation by absolutely irreducible polynomials over finite fields. (English summary) **2003e:11133**
Dai, Zongduo *see* **Jiang, Shaoquan et al., 2003c:11019**
Delamette, Laurence Théorème de Pólya en caractéristique finie. [Pólya theorem in finite characteristic] **2003m:11192**
Flamini, Flaminio *see* **Bini, Gilberto, 2003m:13022**
Gong, Guang *see* **Jiang, Shaoquan et al., 2003c:11019**
Jiang, Shaoquan (*with* Dai, Zongduo; Gong, Guang) On interleaved sequences over finite fields. (English summary) **2003c:11019**
(Jungnickel, Dieter) *see* **Bini, Gilberto, 2003m:13022**
Rosen, Michael ★ Number theory in function fields. (English summary) **2003d:11171**
Smith, Larry Invariants of 2×2-matrices over finite fields. (English summary) **2003i:13007**

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11T60 Finite upper half-planes

Items with secondary classifications in 11T60

Nagoshi, Hirofumi Selberg zeta functions over function fields. (English summary) **2003e:11093**

11T71 Algebraic coding theory; cryptography

Ciet, Mathieu (*with* Quisquater, Jean-Jacques; Sica, Francesco) A secure family of composite finite fields suitable for fast implementation of elliptic curve cryptography (extended abstract). (English summary) **2003k:11187**

Feng, Ke Qin *see* **Li, Chao[1] et al., 2003i:11182**

Férard, Éric Poids des duaux des codes BCH de distance prescrite p^{a_0} et sommes exponentielles. [Weights of duals of BCH codes of given distance p^{a_0} and exponential sums] **2003h:11156**

Heydtmann, Agnes Eileen Generalized geometric Goppa codes. (English summary) **2003d:11180**

Kim, Chang Han *see* **Oh, Sangho et al., 2003k:11188**

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Oh, Sangho (*with* Kim, Chang Han; Kim, Yongtae; Park, Young Ho) Implementation issues for arithmetic over extension fields of characteristic odd. (English summary) **2003k:11188**

Park, Young Ho *see* **Oh, Sangho et al., 2003k:11188**

Quisquater, Jean-Jacques *see* **Ciet, Mathieu et al., 2003k:11187**

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Shparlinski, Igor E. On the distribution of the Diffie-Hellman pairs. (English summary) **2003b:11134**

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Items with secondary classifications in 11T71

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11Uxx Connections with logic

11U05 Decidability [see also 03B25]

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11U09 Model theory [see also 03Cxx]

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11U10 Nonstandard arithmetic [see also 03H15]

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11Yxx Computational number theory [see also 11–04]

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11Y05 Factorization

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11Y11 Primality

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11Y16 Algorithms; complexity [see also 68Q25]

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11Y35 Analytic computations

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11Y40 Algebraic number theory computations

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11Y50 Computer solution of Diophantine equations

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11Y55 Calculation of integer sequences

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Clark, David A. (*with* Jarvis, Norman C.) Dense admissible sequences. (English summary) **2003b:11016**
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11Y60 Evaluation of constants

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Nicely, Thomas R. A new error analysis for Brun's constant. (English summary) **2003d:11184**
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Bradley, David M. *see* **Borwein, Jonathan M. et al., 2003i:33003**
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11Y65 Continued fraction calculations

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11Y70 Values of arithmetic functions; tables

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Benito, Manuel (*with* Varona, Juan L.) Pythagorean triangles with legs less than n. (English summary) **2003b:11027**
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Nicely, Thomas R. A new error analysis for Brun's constant. (English summary) **2003d:11184**
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11Y99 None of the above, but in this section

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11Z05 Miscellaneous applications of number theory

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Castro, Carlos[1] On p-adic stochastic dynamics, supersymmetry and the Riemann conjecture. (English summary) **2003m:81086**
Chamizo, Fernando (*with* Córdoba, Antonio) Lattice points. (Spanish. English summary) **2003j:11118**
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Djordjević, Goran S. (*with* Dragović, Branko G.; Nešić, Ljubiša D.) Adelic quantum mechanics: non-Archimedean and noncommutative aspects. (English summary) **2003d:81156**
— (*with* Dragović, Branko G.; Nešić, Ljubiša D.; Volovich, Igor V.) p-adic and adelic minisuperspace quantum cosmology. (English summary) **2003d:83036**
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Dowker, J. Stuart (*with* Kirsten, Klaus) Elliptic functions and temperature inversion symmetry on spheres. (English summary) **2003g:81155**
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12–XX Field theory and polynomials

12–01 Instructional exposition (textbooks, tutorial papers, etc.)

Bewersdorff, Jörg ★ Algebra für Einsteiger. (German. German summary) [Algebra for beginners] **2003i:12001**

Items with secondary classifications in 12–01

Cohn, P. M. ★ Basic algebra. **2003m:00001**
(Everett, William B.) *see* **Shafarevich, Igor R., 2003g:00002**
Jiang, Hao[1] On some problems of Galois theory. (Chinese. English and Chinese summaries) **2003c:12006**
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Shafarevich, Igor R. ★ Discourses on algebra. (English summary) **2003g:00002**

12–02 Research exposition (monographs, survey articles)

Abhyankar, Shreeram S. A perspective on algebraic geometry. (English summary) **2003m:12001**

12–03 Historical (must also be assigned at least one classification number from Section 01)

Cheng, Xiao Hong (*with* Wang, Jin) Descartes' construction method for 7- and 8-degree equations. (Chinese. English and Chinese summaries)
Escribano, José Javier (*with* Español, Luis) A 1915 paper on Galois theory by Sixto Cámara. (Spanish. English summary) **2003d:12001**
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Spearman, Blair K. *see* **Berndt, Bruce C. et al., 2003i:01027**
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12–04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 12–04

Greuel, Gert-Martin Applications of computer algebra to algebraic geometry, singularity theory and symbolic-numerical solving. **2003h:68157**
Wang, Shao Heng (*with* Wang, Zhi Gang) Discussion about a sort of finite commutative fields by using the software Mathematica. (Chinese. English and Chinese summaries)
Wang, Zhi Gang *see* **Wang, Shao Heng**

12–06 Proceedings, conferences, collections, etc.

(Cassidy, Phyllis J.) *see* **Differential algebra and related topics, 2003b:12001**
(Crespo, Teresa) *see* **Differential Galois theory, 2003m:12002**
(Guo, Li[1]) *see* **Differential algebra and related topics, 2003b:12001**
(Hajto, Zbigniew) *see* **Differential Galois theory, 2003m:12002**
(Keigher, William F.) *see* **Differential algebra and related topics, 2003b:12001**
(Kuhlmann, Franz-Viktor) *see* **Valuation theory and its applications, 2003c:12001**
(Kuhlmann, Salma) *see* **Valuation theory and its applications, 2003c:12001**
(Marshall, Murray A.) *see* **Valuation theory and its applications, 2003c:12001**
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Będlewo ★ Differential Galois theory. **2003m:12002**
Conference:
Valuation Theory ★ Valuation theory and its applications. Vol. I. **2003c:12001**
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Items with secondary classifications in 12–06

(Deschamps, Bruno) *see* **Arithmetic of algebraic coverings, 2003c:14003**
(Kozlov, V. Ya.) *see* **Proceedings in discrete mathematics, 2003a:00018**

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Arithmetic of algebraic coverings ★ Arithmétique des revêtements algébriques. (French) [The arithmetic of algebraic coverings] **2003c:14003**
Arithmétique des revêtements algébriques ★ Arithmétique des revêtements algébriques. (French) [The arithmetic of algebraic coverings] **2003c:14003**
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12Dxx Real and complex fields

12D05 Polynomials: factorization

Items with secondary classifications in 12D05

Borwein, Peter B. ★ Computational excursions in analysis and number theory. (English summary) **2003m:11045**
Dubickas, Artūras Polynomials with many factors in cyclotomic extensions. (English and Lithuanian summaries) **2003k:11160**
Pritsker, Igor E. Norms of products and factors of polynomials. **2003j:30014**

12D10 Polynomials: location of zeros (algebraic theorems) {For the analytic theory, see 26C10, 30C15.}

Grewal, A. S. *see* **Pathak, H. K.**
Kim, Seon-Hong Sums of two polynomials with each having real zeros symmetric with the other. (English summary) **2003c:12002**
Klose, Joachim Ein funktionentheoretischer Beweis für Masons Nullstellensatz. [A function-theoretic proof for Mason's Nullstellensatz] **2003c:12003**
Kostov, Vladimir Petrov (*with* Shapiro, Boris Zalmanovich) On arrangements of roots for a real hyperbolic polynomial and its derivatives. (English summary) **2003e:12001**
— Root configurations for hyperbolic polynomials of degree 3, 4, and 5. (Russian)
Lasserre, Jean B. Polynomials with all zeros real and in a prescribed interval. (English summary) **2003k:12001**
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Pathak, H. K. (*with* Grewal, A. S.) Geometrical solution of some cubic equations with non-real roots. (English summary)
Rodriguez-Villegas, Fernando On the zeros of certain polynomials. (English summary) **2003d:12002**
Shapiro, Boris Zalmanovich *see* **Kostov, Vladimir Petrov, 2003e:12001**
Ştefănescu, Doru Inequalities on polynomial roots. (English summary) **2003f:12001**
Todorov, Pavel G. A representation of a nonnegative algebraic polynomial of degree four as a sum of two squares of real polynomials. (English summary) **2003b:12002a**
— Errata to: "A representation of a nonnegative algebraic polynomial of degree four as a sum of two squares of real polynomials". **2003b:12002b**

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Bistritz, Yuval Zero location of polynomials with respect to the unit-circle unhampered by nonessential singularities. (English summary) **2003a:30005**
Boyd, David W. On a problem of Byrnes concerning polynomials with restricted coefficients. II. (English summary) **2003d:11035**
Chambers, Scott *see* **Lester, David et al., 2003g:65066**
Coppersmith, Don Finding small solutions to small degree polynomials. (English summary) **2003f:11034**
D'Andrea, Carlos (*with* Emiris, Ioannis Z.) Hybrid sparse resultant matrices for bivariate polynomials. (English summary) **2003g:15009**
Dembo, Amir (*with* Poonen, Bjorn; Shao, Qi-Man; Zeitouni, Ofer) Random polynomials having few or no real zeros. **2003f:60092**
Dubickas, Artūras On the order of vanishing of polynomials. (English summary) **2003k:42004**
Emiris, Ioannis Z. *see* **D'Andrea, Carlos, 2003g:15009**
Eremenko, Alexandre (*with* Gabrièlov, A. M.) Degrees of real Wronski maps. (English summary) **2003g:14074**
Gabrièlov, A. M. *see* **Eremenko, Alexandre, 2003g:14074**
Gao, Li Xin (*with* Sun, You Xian) On the optimum radius of robust stability for Schur polynomials. (English summary) **2003f:93069**
Lakatos, Piroska On polynomials having zeros on the unit circle. (French summary) **2003b:30007**
— On zeros of reciprocal polynomials. (English summary) **2003k:30012**
Lester, David (*with* Chambers, Scott; Lu, Heoi Lee) A constructive algorithm for finding the exact roots of polynomials with computable real coefficients. (English summary) **2003g:65066**
Lu, Heoi Lee *see* **Lester, David et al., 2003g:65066**
Mera, Nicolae *see* **Mera, Severina, 2003m:26018**
Mera, Severina (*with* Mera, Nicolae) On the fundamental theorem of algebra. Proof based on topology. (English summary) **2003m:26018**
Pintér, Ákos Zeros of the sum of polynomials. (English summary) **2003d:11036**
Poonen, Bjorn *see* **Dembo, Amir et al., 2003f:60092**
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12D15 Fields related with sums of squares (formally real fields, Pythagorean fields, etc.) [see also 11Exx]

Berr, Ralph (*with* Delon, Françoise) Sums of powers in function fields. (English summary) **2003a:12001**
Delon, Françoise *see* **Berr, Ralph, 2003a:12001**
Helton, J. William "Positive" noncommutative polynomials are sums of squares. (English summary) **2003k:12002**

Items with secondary classifications in 12D15

Astier, Vincent Some model-theoretic results in the algebraic theory of quadratic forms. (English summary) **2003d:03064**
Cimprič, Jaka Post hulls of spaces of signatures. (English summary) **2003a:11035**
Dickmann, M. (*with* Miraglia, F.) Orders and relative Pythagorean closures. **2003e:13036**
Kuhlmann, Salma (*with* Marshall, Murray A.) Positivity, sums of squares and the multi-dimensional moment problem. (English summary) **2003j:14078**
Leep, David B. (*with* Smith, Tara L.) Multiquadratic extensions, rigid fields and Pythagorean fields. (English summary) **2003a:11037**
Marshall, Murray A. *see* **Kuhlmann, Salma**, **2003j:14078**
Miraglia, F. *see* **Dickmann, M.**, **2003e:13036**
Palmgren, Erik An intuitionistic axiomatisation of real closed fields. (English summary) **2003b:03089**
Smith, Tara L. *see* **Leep, David B.**, **2003a:11037**

12Exx General field theory

12E05 Polynomials (irreducibility, etc.)

Cohen, Stephen D. (*with* Movahhedi, Abbas; Salinier, Alain) Factorization over local fields and the irreducibility of generalized difference polynomials. **2003i:12002**
Garefalakis, Theodoulos (*with* Panario, Daniel) Polynomials over finite fields free from large and small degree irreducible factors. (English summary) **2003j:12001**
Movahhedi, Abbas *see* **Cohen, Stephen D. et al.**, **2003i:12002**
Panario, Daniel *see* **Garefalakis, Theodoulos**, **2003j:12001**
Salinier, Alain *see* **Cohen, Stephen D. et al.**, **2003i:12002**
Wang, Julie Tzu-Yueh Uniqueness polynomials and bi-unique range sets for rational functions and non-Archimedean meromorphic functions. **2003h:12002**

Items with secondary classifications in 12E05

Adelberg, Arnold (*with* Filaseta, Michael) On mth order Bernoulli polynomials of degree m that are Eisenstein. (English summary) **2003f:11026**
Ayad, Mohamed Sur les polynômes $f(X, Y)$ tels que $K[f]$ est intégralement fermé dans $K[X, Y]$. [Polynomials $f(X, Y)$ such that $K(f)$ is integrally closed in $K[X, Y]$] **2003h:11028**
Cavachi, Marius (*with* Vâjâitu, Marian; Zaharescu, Alexandru) A class of irreducible polynomials. (English summary) **2003g:12002**
Filaseta, Michael *see* **Adelberg, Arnold**, **2003f:11026**
Goldwasser, John L. *see* **Klostermeyer, William F.**, **2003e:11015**
Klostermeyer, William F. (*with* Goldwasser, John L.) Nullspace-primes and Fibonacci polynomials. **2003e:11015**
Klüners, Jürgen Algorithms for function fields. (English summary) **2003k:11193**
Panario, Daniel (*with* Pittel, Boris; Richmond, L. Bruce; Viola, Alfredo) Analysis of Rabin's irreducibility test for polynomials over finite fields. (English summary) **2003e:68152**
Pittel, Boris *see* **Panario, Daniel et al.**, **2003e:68152**
Richmond, L. Bruce *see* **Panario, Daniel et al.**, **2003e:68152**
Schinzel, A. On a decomposition of polynomials in several variables. II. (English summary) **2003i:11048**
Vâjâitu, Marian *see* **Cavachi, Marius et al.**, **2003g:12002**
Viola, Alfredo *see* **Panario, Daniel et al.**, **2003e:68152**
Winkler, Joab R. A companion matrix resultant for Bernstein polynomials. (English summary) **2003m:15014**
Zaharescu, Alexandru *see* **Cavachi, Marius et al.**, **2003g:12002**

12E10 Special polynomials

Items with secondary classifications in 12E10

Brunotte, Horst Characterization of CNS trinomials. (English summary) **2003k:11157**
Dimca, Alexandru On polar Cremona transformations. **2003m:14022**
(Galois, Évariste) *see* **Radloff, Ivo**, **2003e:01021**
Radloff, Ivo Évariste Galois: principles and applications. (English and German summaries) **2003e:01021**

12E12 Equations

Chiba, Katsuo Free fields in complete skew fields and their valuations. (Japanese. English summary) (*see* **2003k:16001**)
Poirier, Sylvain Nouvelle méthode de résolution des équations du 3ème degré. (French summary) [New solution method for third-order equations]

Items with secondary classifications in 12E12

Reichstein, Zinovy (*with* Youssin, Boris) Conditions satisfied by characteristic polynomials in fields and division algebras. (English summary) **2003g:12001**
Youssin, Boris *see* **Reichstein, Zinovy**, **2003g:12001**

12E15 Skew fields, division rings [see also 11R52, 11R54, 11S45, 16Kxx]

Craven, Thomas C. Valuations and Hermitian forms on skew fields. (English summary) **2003k:12003**
Huang, Li Ping[3] (*with* So, Wasin) Quadratic formulas for quaternions. (English summary) **2003d:12003**
Reichstein, Zinovy (*with* Youssin, Boris) Conditions satisfied by characteristic polynomials in fields and division algebras. (English summary) **2003g:12001**
So, Wasin *see* **Huang, Li Ping[3]**, **2003d:12003**
Youssin, Boris *see* **Reichstein, Zinovy**, **2003g:12001**

Items with secondary classifications in 12E15

Kolesnikov, P. S. On various definitions of algebraically closed skew fields. (Russian. Russian summary) **2003a:16027**
Serhir, A. Niveau hermitien d'une algèbre de quaternions à division munie d'une involution de deuxième espèce. (English summary) [Hermitian level of a quaternion division algebra with involution of the second kind] **2003i:16029**
Treur, Jan On centralizer-related intermediate fields of a skew field extension. (English summary) **2003f:16033**

12E20 Finite fields (field-theoretic aspects)

Agou, Simon Joseph (*with* Deléglise, Marc; Nicolas, Jean-Louis) Short polynomial representations for square roots modulo p. (English and French summaries) **2003m:12003**
Ballantine, Cristina M. (*with* Roberts, Joel L.) A simple proof of Rolle's theorem for finite fields. **2003b:12003**
Chen, Xiao Feng *see* **Li, Zhi Hui et al.**
Deléglise, Marc *see* **Agou, Simon Joseph et al.**, **2003m:12003**
Li, Rui Hu *see* **Li, Zhi Hui et al.**
Li, Zhi Hui (*with* Li, Rui Hu; Chen, Xiao Feng) Characterization and counting of maximal linear orthomorphism permutations. (Chinese. English and Chinese summaries)
Massouros, Christos G. Getting a field from differences of its multiplicative subgroups. (English and Romanian summaries) **2003f:12002**
Nicolas, Jean-Louis *see* **Agou, Simon Joseph et al.**, **2003m:12003**
Petrenko, B. V. On the sum of two primitive elements of maximal subfields of a finite field. (English summary) **2003m:12004**
Roberts, Joel L. *see* **Ballantine, Cristina M.**, **2003b:12003**
Wang, Shao Heng (*with* Wang, Zhi Gang) Discussion about a sort of finite commutative fields by using the software Mathematica. (Chinese. English and Chinese summaries)
Wang, Zhi Gang *see* **Wang, Shao Heng**

Items with secondary classifications in 12E20

Allombert, Bill Explicit computation of isomorphisms between finite fields. (English summary) **2003f:11187**
Ballet, Stéphane Quasi-optimal algorithms for multiplication in the extensions of $\mathbb{F}_{16}$ of degree 13, 14 and 15. (English summary) **2003b:11133**
Couveignes, Jean-Marc Isomorphisms between Artin-Schreier towers. (English summary) **2003a:11157**
Elia, Michele (*with* Interlando, J. Carmelo; Palazzo, Reginaldo, Jr.) Computing the reciprocal of units in Galois rings. (English summary) **2003e:13037**
Gel′fand, Izrail′ Moiseevich (*with* Graev, M. I.) Hypergeometric functions over finite fields. (Russian) **2003f:33020**
Graev, M. I. *see* **Gel′fand, Izrail′ Moiseevich**, **2003f:33020**
Imaña, José Luis Bit-parallel arithmetic implementations over finite fields GF(2^m) with reconfigurable hardware. (English summary) **2003g:68003**
Interlando, J. Carmelo *see* **Elia, Michele et al.**, **2003e:13037**
Palazzo, Reginaldo, Jr. *see* **Elia, Michele et al.**, **2003e:13037**

12E25 Hilbertian fields; Hilbert's irreducibility theorem

Cavachi, Marius (*with* Vâjâitu, Marian; Zaharescu, Alexandru) A class of irreducible polynomials. (English summary) **2003g:12002**
Müller, Peter[1] Finiteness results for Hilbert's irreducibility theorem. (English and French summaries) **2003h:12003**
Vâjâitu, Marian *see* **Cavachi, Marius et al.**, **2003g:12002**
Zaharescu, Alexandru *see* **Cavachi, Marius et al.**, **2003g:12002**

Items with secondary classifications in 12E25

Gao, Shu Hong Factoring multivariate polynomials via partial differential equations. (English summary) **2003m:12014**
Geyer, Wulf-Dieter (*with* Jarden, Moshe) PSC Galois extensions of Hilbertian fields. (English summary) **2003c:12004**
Jarden, Moshe *see* **Geyer, Wulf-Dieter**, **2003c:12004**

12E30 Field arithmetic

Frey, Gerhard (*with* Jarden, Moshe) Horizontal isogeny theorems. (English summary) **2003i:12003**
Geyer, Wulf-Dieter (*with* Jarden, Moshe) PSC Galois extensions of Hilbertian fields. (English summary) **2003c:12004**
Jarden, Moshe *see* **Geyer, Wulf-Dieter**, **2003c:12004** *and* **Frey, Gerhard**, **2003i:12003**

Items with secondary classifications in 12E30

Chatzidakis, Zoé Properties of forking in ω-free pseudo-algebraically closed fields. (English summary) **2003g:03055**
Müller, Peter[1] Finiteness results for Hilbert's irreducibility theorem. (English and French summaries) **2003h:12003**

12E99 None of the above, but in this section

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13–XX Commutative rings and algebras

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13A50 Actions of groups on commutative rings; invariant theory [see also 14L24]

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Neusel, Mara D. The transfer in the invariant theory of modular permutation representations. II. (English summary) **2003d:13004**
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13Bxx Ring extensions and related topics

13B02 Extension theory

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Zafrullah, Muhammad *see* **Dumitrescu, Tiberiu, 2003h:13008**

Items with secondary classifications in 13B02

Brzeziński, Tomasz The structure of corings: induction functors, Maschke-type theorem, and Frobenius and Galois-type properties. (English summary) **2003h:16060**
Jarboui, Noôman (*with* Yengui, Ihsen) Absolutely S-domains and pseudo-polynomial rings. (English summary) **2003i:13017**
Oda, Susumu (*with* Yoshida, Ken-ichi[1]) Extensions $R[\beta] \cap R[\beta^{-1}]$ and $R[\alpha] \cap R[\alpha^{-1}]$ are equal for any transformation $\beta = (c\alpha - d)/(a\alpha - b)$ of an anti-integral element α with $ad - bc \in R^{\times}$. (English summary) **2003b:13013**
Schoutens, Hans Recursive sequences and faithfully flat extensions. (English summary) **2003c:13008**
Yengui, Ihsen *see* **Jarboui, Noôman, 2003i:13017**
Yoshida, Ken-ichi[1] *see* **Oda, Susumu, 2003b:13013**

13B05 Galois theory

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Szeto, George (*with* Xue, Lianyong) On splitting rings for Azumaya skew polynomial rings. (English summary) **2003a:16039**
Xue, Lianyong *see* **Szeto, George, 2003a:16039**

13B10 Morphisms

Ionescu, Cristodor (*with* Restuccia, Gaetana) A note on P-morphisms. (English summary) **2003d:13007**
Mesablishvili, Bachuki On some properties of pure morphisms of commutative rings. (English summary) **2003c:13007**
Restuccia, Gaetana *see* **Ionescu, Cristodor, 2003d:13007**
Schoutens, Hans Recursive sequences and faithfully flat extensions. (English summary) **2003c:13008**

Items with secondary classifications in 13B10

Jelonek, Zbigniew (*with* Karaś, Marek) The set of points at which a morphism of affine schemes is not finite. (English summary) **2003c:14004**
Karaś, Marek *see* **Jelonek, Zbigniew, 2003c:14004**
Liu, Zhuo Jun *see* **Wang, Ming Sheng[2], 2003c:14072**
Wang, Ming Sheng[2] (*with* Liu, Zhuo Jun) A note on polynomial automorphism identity sets. (Chinese. English and Chinese summaries) **2003c:14072**

13B21 Integral dependence

Anderson, D. D. (*with* Dobbs, David E.) Residually FIP extensions of commutative rings. (English summary) **2003b:13012**
Dobbs, David E. *see* **Anderson, D. D., 2003b:13012**
Oda, Susumu (*with* Yoshida, Ken-ichi[1]) Extensions $R[\beta] \cap R[\beta^{-1}]$ and $R[\alpha] \cap R[\alpha^{-1}]$ are equal for any transformation $\beta = (c\alpha - d)/(a\alpha - b)$ of an anti-integral element α with $ad - bc \in R^{\times}$. (English summary) **2003b:13013**
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Eisenbud, David (*with* Huneke, Craig; Ulrich, Bernd) What is the Rees algebra of a module? (English summary) **2003j:13003**
Huneke, Craig *see* **Eisenbud, David et al., 2003j:13003**
Oda, Susumu (*with* Yoshida, Ken-ichi[1]) On units of an anti-integral extension $R[\alpha]$ and conditions for an linear fractional transformation β of α to satisfy $R[\beta] = R[\alpha]$. (English summary) **2003g:13006**
Ulrich, Bernd *see* **Eisenbud, David et al., 2003j:13003**
Yoshida, Ken-ichi[1] *see* **Oda, Susumu, 2003g:13006**

13B22 Integral closure of rings and ideals [see also 13A35]; integrally closed rings, related rings (Japanese, etc.)

Chang, Gyu Whan (*with* Kang, Byung Gyun) Integral closure of a ring whose regular ideals are finitely generated. (English summary) **2003i:13010**
Kang, Byung Gyun *see* **Chang, Gyu Whan, 2003i:13010**
Ratliff, Louis J., Jr. (*with* Rush, David E.) Asymptotic primes of delta closures of ideals. (English summary) **2003k:13010**
Rush, David E. *see* **Ratliff, Louis J., Jr., 2003k:13010**
Simis, Aron (*with* Villarreal, Rafael H.) Constraints for the normality of monomial subrings and birationality. (English summary) **2003k:13011**
Villarreal, Rafael H. *see* **Simis, Aron, 2003k:13011**

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Anderson, D. D. (*with* Dumitrescu, Tiberiu) Condensed domains. (English summary) **2003m:13001**
Anderson, David F. (*with* Badawi, Ayman) Divisibility conditions in commutative rings with zerodivisors. (English summary) **2003e:13002**
Badawi, Ayman *see* **Anderson, David F., 2003e:13002**
Bonanzinga, Vittoria (*with* Escobar, Cesar A.; Villarreal, Rafael H.) On the normality of Rees algebras associated to totally unimodular matrices. (English summary) **2003f:13002**
Cimen, N. (*with* Erdogan, Ali; Tıraş, Y.) Linear growth of primary decompositions of modules and integral closures. (English summary) **2003k:13003**
Dumitrescu, Tiberiu *see* **Anderson, D. D., 2003m:13001**
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Escobar, Cesar A. *see* **Bonanzinga, Vittoria et al., 2003f:13002**
Gaffney, Terence The theory of integral closure of ideals and modules: applications and new developments. **2003b:32033**
Hochster, Melvin Presentation depth and the Lipman-Sathaye Jacobian theorem. (English summary) **2003g:13005**
Ionescu, Cristodor (*with* Restuccia, Gaetana) A note on P-morphisms. (English summary) **2003d:13007**
Jarrah, Abdul Salam Integral closures of Cohen-Macaulay monomial ideals. (English summary) **2003k:13024**
(Kleiman, Steven) *see* **Gaffney, Terence, 2003b:32033**
Restuccia, Gaetana *see* **Ionescu, Cristodor, 2003d:13007**
Sawaya, Jamil Divisions selon les puissances fractionnaires d'un idéal engendré par une suite régulière dans l'anneau des germes à l'origine de fonctions holomorphes sur $\mathbb{C}^2$. (English and French summaries) [Divisions by the fractional powers of an ideal generated by a regular sequence in the ring of germs of holomorphic functions at the origin of $\mathbb{C}^2$] **2003a:32008**
(Thorup, Anders) *see* **Gaffney, Terence, 2003b:32033**
Tıraş, Y. *see* **Cimen, N. et al., 2003k:13003**
Villarreal, Rafael H. *see* **Bonanzinga, Vittoria et al., 2003f:13002**

13B24 Going up; going down; going between

Brenner, Holger Lifting chains of prime ideals. (English summary) **2003m:13009**

13B25 Polynomials over commutative rings [see also 11C08, 13F20, 13M10]

Berson, Joost Stably tame coordinates. (English summary) **2003e:13009**
Drensky, Vesselin (*with* Yu, Jie-Tai) Retracts and test polynomials of polynomial algebras. (English summary) **2003f:13007**
Heinzer, William J. (*with* Lantz, David C.) Factorization of monic polynomials. (English summary) **2003m:13010**
Lantz, David C. *see* **Heinzer, William J., 2003m:13010**
Yu, Jie-Tai *see* **Drensky, Vesselin, 2003f:13007**

Items with secondary classifications in 13B25

Benedetto, Robert L. An elementary product identity in polynomial dynamics. **2003g:11021**
Bi, Guoan *see* **Zeng, Yonghong et al., 2003a:65123**
Glasby, S. P. On the tensor product of polynomials over a ring. (English summary) **2003d:13025**
Larson, Suzanne The intermediate value theorem in f-rings. **2003g:06022**
Lin, Zhi Ping *see* **Zeng, Yonghong et al., 2003a:65123**
Maubach, Stefan The linearisation conjecture and other problems over nonreduced rings. (English summary) **2003b:14075**
Novik, Isabella Lyubeznik's resolution and rooted complexes. (English summary) **2003j:13021**
Zeng, Yonghong (*with* Bi, Guoan; Lin, Zhi Ping) Combined polynomial transform and radix-q algorithm for multi-dimensional DCT-III. (English summary) **2003a:65123**

13B30 Quotients and localization

Items with secondary classifications in 13B30

Hager, Anthony W. (*with* Martinez, Jorge[2]) The ring of α-quotients. (English summary) **2003f:06027**
Martinez, Jorge[2] *see* **Hager, Anthony W., 2003f:06027**

13B35 Completion [see also 13J10]

Items with secondary classifications in 13B35

Ionescu, Cristodor (*with* Restuccia, Gaetana) A note on P-morphisms. (English summary) **2003d:13007**
Restuccia, Gaetana *see* **Ionescu, Cristodor, 2003d:13007**

13B40 Étale and flat extensions; Henselization; Artin approximation [see also 13J15, 14B12, 14B25]

Avtar, Ram Henselization of commutative ring.

Items with secondary classifications in 13B40

Aberbach, Ian M. (*with* Enescu, Florian) Test ideals and base change problems in tight closure theory. (English summary) **2003g:13003**
Enescu, Florian *see* **Aberbach, Ian M., 2003g:13003**
Etesse, Jean-Yves Relèvement de schémas et algèbres de Monsky-Washnitzer: théorèmes d'équivalence et de pleine fidélité. [Lifting of schemes and Monsky-Washnitzer algebras: equivalence and full faithfulness theorems] **2003g:14025**
Picavet, Gabriel Algebraically flat or projective algebras. (English summary) **2003i:13009**

13B99 None of the above, but in this section

Items with secondary classifications in 13B99

Picavet-L'Hermitte, Martine Root closure in algebraic orders. (English summary) **2003e:13034**

13Cxx Theory of modules and ideals

13C05 Structure, classification theorems

Atani, Shahabaddin Ebrahimi Submodules of secondary modules. (English summary) **2003h:13011**
Karr, Ryan Failure of cancellation for quartic and higher-degree orders. (English summary) **2003j:13009**
Kattchee, K. Monoids and direct-sum decompositions over local rings. (English summary) **2003i:13011**
Le Thanh Nhan *see* **Nguyễn Tự Cư'ò'ng, 2003c:13009**
Nguyễn Tự Cư'ò'ng (*with* Le Thanh Nhan) On representable linearly compact modules. (English summary) **2003c:13009**

Items with secondary classifications in 13C05

Bazzoni, S. (*with* Salce, Luigi) Strongly flat covers. (English summary) **2003g:13008**
Salce, Luigi *see* **Bazzoni, S., 2003g:13008**
Yao, Yongwei Primary decomposition: compatibility, independence and linear growth. (English summary) **2003a:13021**

13C10 Projective and free modules and ideals [see also 19A13]

Anvariyeh, S. M. (*with* Davvaz, Bijan) U-split-exact sequences. (English summary) **2003d:13008**
Bhatwadekar, S. M. (*with* Sridharan, Raja) On Euler classes and stably free projective modules. **2003i:13012**
Bullington, Grady D. (*with* Dobbs, David E.) How many random submodules of a free module should be summed to yield the free module? **2003f:13008**
Davvaz, Bijan *see* **Anvariyeh, S. M., 2003d:13008**
Dobbs, David E. *see* **Bullington, Grady D., 2003f:13008**
Feng, Liang Gui (*with* Lam, T. Y.) Projective modules over some Prüfer rings. **2003m:13011**
Gago-Vargas, Jesús Projective modules over rings of polynomials with coefficients in Dedekind domains. (Spanish. Spanish summary) **2003m:13012**
— Constructions in $R[x_1, \dots, x_n]$: applications to K-theory. (English summary) **2003b:13014**
Lam, T. Y. *see* **Feng, Liang Gui, 2003m:13011**
Maxson, C. J. Forcing linearity numbers for projective modules. (English summary) **2003e:13010**
Murthy, M. Pavaman Cancellation problem for projective modules over certain affine algebras. **2003j:13010**
Sridharan, Raja *see* **Bhatwadekar, S. M., 2003i:13012**

Items with secondary classifications in 13C10

Eklof, Paul C. (*with* Shelah, Saharon) Whitehead modules over large principal ideal domains. (English summary) **2003f:13014**
Karr, Ryan Failure of cancellation for quartic and higher-degree orders. (English summary) **2003j:13009**
Mohan Kumar, N. A note on cancellation of reflexive modules. **2003e:13015**
Shelah, Saharon *see* **Eklof, Paul C., 2003f:13014**

13C11 Injective and flat modules and ideals

Ansari-Toroghy, H. Asymptotic stability of some sequences related to integral closure. (English summary) **2003g:13007**
Asadollahi, J. (*with* Khashyarmanesh, K.; Salarian, Sh.) On the minimal flat resolutions of modules. **2003h:13012**
Faith, Carl Indecomposable injective modules and a theorem of Kaplansky. (English summary) **2003i:13013**
Khashyarmanesh, K. *see* **Asadollahi, J. et al., 2003h:13012**
Kreuzer, Alexander (*with* Maxson, C. J.) Forcing linearity numbers for injective modules over PID's. (English summary) **2003d:13009**
Maxson, C. J. *see* **Kreuzer, Alexander, 2003d:13009**
Payrovi, Sh. Structure of the flat covers of Artinian modules. (English summary) **2003f:13009**
Salarian, Sh. *see* **Asadollahi, J. et al., 2003h:13012**

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Ansari-Toroghy, H. M-injectivity and asymptotic behaviour. (English summary) **2003f:13019**
Baba, Kiyoshi (*with* Yoshida, Ken-ichi[1]) Flatness and faithful flatness of a two-generator extension $R[\alpha, \beta]$ of a Noetherian domain R. (English summary) **2003b:13010**
Enochs, Edgar E. (*with* Kim, Hae-Sik; Song, Yeong-Moo) Injective covers over commutative Noetherian rings with global dimension at most two. (English summary) **2003k:13016**
Kim, Hae-Sik *see* **Enochs, Edgar E. et al., 2003k:13016**
Song, Yeong-Moo *see* **Enochs, Edgar E. et al., 2003k:13016**
Yoshida, Ken-ichi[1] *see* **Baba, Kiyoshi, 2003b:13010**

13C12 Torsion modules and ideals

Pusat-Yilmaz, D. (*with* Smith, Patrick F.) Modules which satisfy the radical formula. (English summary) **2003h:13013**
Smith, Patrick F. *see* **Pusat-Yilmaz, D., 2003h:13013**

Items with secondary classifications in 13C12

Eisenbud, David (*with* Huneke, Craig; Ulrich, Bernd) What is the Rees algebra of a module? (English summary) **2003j:13003**
Huneke, Craig *see* **Eisenbud, David et al., 2003j:13003**
Ulrich, Bernd *see* **Eisenbud, David et al., 2003j:13003**

13C13 Other special types

Ali, Majid M. (*with* Smith, David J.) Multiplication modules and a theorem of P. F. Smith. (English summary) **2003e:13011**
Al-Shaniafi, Yousef *see* **Anderson, D. D., 2003e:13012**
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Atani, Shahabaddin Ebrahimi On indecomposable separated secondary modules over $\mathbb{Z}G$. (English summary) **2003i:13014**
— On secondary modules over pullback rings. (English summary) **2003e:13013**
Bazzoni, S. (*with* Salce, Luigi) Strongly flat covers. (English summary) **2003g:13008**
Göbel, Rüdiger (*with* Paras, Agnes T.) Splitting off free summands of torsion-free modules over complete DVRs. (English summary) **2003c:13010**
Heinzer, William J. (*with* Ratliff, Louis J., Jr.; Rush, David E.) Basically full ideals in local rings. (English summary) **2003e:13014**
Mohan Kumar, N. A note on cancellation of reflexive modules. **2003e:13015**
Morariu, Wanda A class of modules with primary decomposition. (English summary) **2003a:13007**
Nguyen Thi Hong Loan *see* **Nguyễn Tự' Cu'ò'ng, 2003i:13015**
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Paras, Agnes T. *see* **Göbel, Rüdiger, 2003c:13010**
Ratliff, Louis J., Jr. *see* **Heinzer, William J. et al., 2003e:13014**
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Salce, Luigi Warfield domains: module theory from linear algebra to commutative algebra through abelian groups. (English summary) **2003h:13014**
— *see also* **Bazzoni, S., 2003g:13008**
Smith, David J. *see* **Ali, Majid M., 2003e:13011**
Xue, Wei Min² Generalized Matlis duality and linear compactness. (English summary) **2003e:13016**

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Albrecht, Ulrich (*with* Giovannitti, Anthony J.; Goeters, H. Patrick) A class of torsion-free abelian groups characterized by the ranks of their socles. (English summary) **2003e:20060**
Giovannitti, Anthony J. *see* **Albrecht, Ulrich et al., 2003e:20060**
Goeters, H. Patrick *see* **Albrecht, Ulrich et al., 2003e:20060**
Kleĭner, G. B. Polyvectors of rank 2 over fields and commutative rings. (Russian. Russian summary) **2003d:15036**
Rangaswamy, K. M. On torsion-free modules over valuation domains. (English summary) **2003b:13024**
Rashid, Laila E. M. Sub-adjoint ideals and hyperplane sections. (English summary) **2003m:14010**
Römer, Tim Homological properties of bigraded algebras. (English summary) **2003d:13015**
Zanardo, Paolo Modules over Archimedean valuation domains and the problem of bounded module type. **2003b:13002**

13C14 Cohen-Macaulay modules [see also 13H10]

Herzog, Jürgen (*with* Sbarra, Enrico) Sequentially Cohen-Macaulay modules and local cohomology. **2003i:13016**
Huneke, Craig (*with* Leuschke, Graham J.) Two theorems about maximal Cohen-Macaulay modules. (English summary) **2003j:13011**
Kang, Ming-Chang Addendum to: "Almost Cohen-Macaulay modules" [Comm. Algebra **29** (2001), no. 2, 781–787; MR 2002e:13028]. **2003a:13008**
Laza, Radu (*with* O'Carroll, Liam; Popescu, Dorin) Maximal Cohen-Macaulay modules over $Y_1^3 + \cdots + Y_n^3$ with few generators. (English summary) **2003a:13009**
— (*with* Pfister, Gerhard; Popescu, Dorin) Maximal Cohen-Macaulay modules over the cone of an elliptic curve. (English summary) **2003k:13012**
Leuschke, Graham J. Gorenstein modules, finite index, and finite Cohen-Macaulay type. (English summary) **2003a:13010**
— *see also* **Huneke, Craig, 2003j:13011**
Nishida, Kenji Cohen-Macaulay isolated singularities with a dualizing module. (*see* **2003c:16001**)
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Popescu, Dorin *see* **Laza, Radu et al., 2003a:13009** *and* **2003k:13012**
Sbarra, Enrico *see* **Herzog, Jürgen, 2003i:13016**

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Hübl, Reinhold (*with* Swanson, Irena) Normal cones of monomial primes. (English summary) **2003k:13005**
Le Thanh Nhan *see* **Nguyễn Tự' Cu'ò'ng et al., 2003f:13018**
Nguyen Thai Hoa *see* **Nguyễn Tự' Cu'ò'ng et al., 2003f:13018**
Nguyễn Tự' Cu'ò'ng (*with* Nguyen Thai Hoa; Le Thanh Nhan) On modules whose local cohomology modules have generalized Cohen-Macaulay Matlis duals. (English summary) **2003f:13018**
Simon, Anne-Marie (*with* Strooker, Jan R.) Reduced Bass numbers, Auslander's δ-invariant and certain homological conjectures. (English summary) **2003j:13018**
Strooker, Jan R. *see* **Simon, Anne-Marie, 2003j:13018**
Swanson, Irena *see* **Hübl, Reinhold, 2003k:13005**

13C15 Dimension theory, depth, related rings (catenary, etc.)

Bouchiba, Samir (*with* Dobbs, David E.; Kabbaj, Salah-Eddine) On the prime ideal structure of tensor products of algebras. (English summary) **2003h:13015**
Brenner, Holger On superheight conditions for the affineness of open subsets. (English summary) **2003a:13011**
Dobbs, David E. *see* **Bouchiba, Samir et al., 2003h:13015**
Jarboui, Noômane (*with* Yengui, Ihsen) Absolutely S-domains and pseudo-polynomial rings. (English summary) **2003i:13017**
Kabbaj, Salah-Eddine *see* **Bouchiba, Samir et al., 2003h:13015**
Lü, Rencai (*with* Tang, Zhongming) The f-depth of an ideal on a module. (English summary) **2003g:13009**
Man, Shing Hing (*with* Smith, Patrick F.) On chains of prime submodules. (English summary) **2003d:13010**
Smith, Patrick F. *see* **Man, Shing Hing, 2003d:13010**
Tang, Zhongming *see* **Lü, Rencai, 2003g:13009**
Yengui, Ihsen On questions related to saturated chains of primes in polynomial rings. (English summary) **2003k:13013**
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Amberg, Bernhard (*with* Kazarin, Lev) Commutative nilpotent p-algebras with small dimension. **2003k:13002**
Ben Nasr, Mabrouk Some remarks on residually algebraic pairs of rings. (English summary) **2003d:13005**
— (*with* Jarboui, Noômane) Intermediate domains between a domain and some intersection of its localizations. (English and Italian summaries) **2003j:13008**
Brodmann, Markus P. (*with* Sharp, Rodney Y.) On the dimension and multiplicity of local cohomology modules. (English summary) **2003g:13022**
Christensen, Lars Winther Sequences for complexes. II. **2003j:13019**
Faridi, Sara The facet ideal of a simplicial complex. (English summary) **2003k:13027**
Flenner, Hubert (*with* Manaresi, Mirella) Equimultiplicity and equidimensionality of normal cones. **2003a:13029**
Florenz, Mark (*with* Kunvipusilkul, Davina; Yang, Junghee) Constructing chains of excellent rings with local generic formal fibers. (English summary) **2003f:13024**
Ghezzi, Laura On the depth of the associated graded ring of an ideal. (English summary) **2003b:13004**
Heinzer, William J. (*with* Rotthaus, Christel; Wiegand, Sylvia) Intermediate rings between a local domain and its completion. II. (English summary) **2003e:13003**
Ionescu, Cristodor (*with* Restuccia, Gaetana) A note on P-morphisms. (English summary) **2003d:13007**
Jarboui, Noômane *see* **Ben Nasr, Mabrouk, 2003j:13008**
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Marcelo Vega, Agustín (*with* Marcelo Wirnitzer, Félix; Rodríguez Mielgo, César) The grade conjecture and the S_2 condition. (English summary) **2003e:13025**
Marcelo Wirnitzer, Félix *see* **Marcelo Vega, Agustín et al., 2003e:13025**
Nguyễn Tự' Cu'ò'ng (*with* Le Thanh Nhan) On the Noetherian dimension of Artinian modules. (English summary) **2003h:13024**
Restuccia, Gaetana *see* **Ionescu, Cristodor, 2003d:13007**
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Rotthaus, Christel *see* **Heinzer, William J. et al., 2003e:13003**
Sather-Wagstaff, Sean Intersections of symbolic powers of prime ideals. (English summary) **2003c:13017**
Sharp, Rodney Y. *see* **Brodmann, Markus P., 2003g:13022**
Wang, Hsin-Ju On the associated graded rings of ideals of Cohen-Macaulay rings. **2003b:13006**
Wiegand, Sylvia *see* **Heinzer, William J. et al., 2003e:13003**
Yang, Junghee *see* **Florenz, Mark et al., 2003f:13024**

13C20 Class groups [see also 11R29]

Anderson, David F. The class group and local class group of an integral domain. **2003b:13015**
El Baghdadi, Saïd On the class group of a pullback. (English summary) **2003d:13011**
— (*with* Izelgue, L.; Kabbaj, Salah-Eddine) On the class group of a graded domain. (English summary) **2003d:13012**
Izelgue, L. *see* **El Baghdadi, Saïd et al., 2003d:13012**
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Tornaria, Gonzalo The Sylow 2-subgroup of the ideal class group in a real quadratic order. (Spanish. Spanish summary) **2003f:13010**

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Gabelli, Stefania (*with* Houston, Evan) Ideal theory in pullbacks. **2003a:13001**
Hassler, Wolfgang Factorization properties of Krull monoids with infinite class group. (English summary) **2003c:20072**
Heinzer, William J. (*with* Li, Aihua[1]; Ratliff, Louis J., Jr.; Rush, David E.) Monoidal extensions of a Cohen-Macaulay unique factorization domain. (English summary) **2003d:13017**
Houston, Evan *see* **Gabelli, Stefania, 2003a:13001**
Li, Aihua[1] *see* **Heinzer, William J. et al., 2003d:13017**
Ma, Lian Rong (*with* Feng, Ke Qin) On imaginary quadratic function fields with ideal class group of exponent ≤ 2. (Chinese. English and Chinese summaries) **2003g:11133**
Oda, Susumu (*with* Yoshida, Ken-ichi[1]) On units of an anti-integral extension $R[\alpha]$ and conditions for an linear fractional transformation β of α to satisfy $R[\beta] = R[\alpha]$. (English summary) **2003g:13006**
Özbudak, Ferruh A note on divisor class groups of degree zero of algebraic function fields over finite fields. (English summary) **2003m:11194**
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13Dxx Homological methods {For noncommutative rings, see 16Exx; for general categories, see 18Gxx.}

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13D30 Torsion theory [see also 13C12, 18E40]

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13F25 Formal power series rings [see also 13J05]

Anderson, D. D. (*with* Kang, Byung Gyun; Park, Mi Hee) GCD domains and power series rings. (English summary) **2003j:13029**
Ben Nasr, Mabrouk Krull and valuative dimensions of power series rings over a pullback. (English summary) **2003e:13033**
Coykendall, Jim The SFT property does not imply finite dimension for power series rings. (English summary) **2003k:13025**
Frohn, Daniel A counterexample concerning ACCP in power series rings. (English summary) **2003h:13029**
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13F30 Valuation rings [see also 13A18]

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Kang, Byung Gyun (*with* Park, Mi Hee) Completion of a globalized pseudo-valuation domain. (English summary) **2003m:13018**
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Popescu, Angel An Euclidean algorithm in $K[X_1, \ldots, X_n]$ and an application in valuation theory. (English summary) **2003e:13029**
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13F40 Excellent rings

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13F45 Seminormal rings

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Picavet-L'Hermitte, Martine Root closure in algebraic orders. (English summary) **2003e:13034**

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13F50 Rings with straightening laws, Hodge algebras

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De Negri, Emanuela Some results on Hilbert series and a-invariant of Pfaffian ideals. **2003b:13016**
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Li, Hongbo (*with* Wu, Yihong) Automated theorem proving in projective geometry with bracket algebra. (English summary) **2003b:51001**
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13F55 Face and Stanley-Reisner rings; simplicial complexes [see also 55U10]

Faridi, Sara The facet ideal of a simplicial complex. (English summary) **2003k:13027**
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13F99 None of the above, but in this section

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13G05 Integral domains

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Anderson, David F. (*with* Kim, Hwankoo; Park, Jeanam) Factorable domains. (English summary) **2003j:13031**
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13Hxx Local rings and semilocal rings

13H05 Regular local rings

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Goto, Shiro (*with* Hayasaka, Futoshi; Iai, Shin-Ichiro) The a-invariant and Gorensteinness of graded rings associated to filtrations of ideals in regular local rings. (English summary) **2003j:13004**
Hayasaka, Futoshi *see* **Goto, Shiro et al., 2003j:13004**
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Sather-Wagstaff, Sean Intersections of symbolic powers of prime ideals. (English summary) **2003c:13017**
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13H10 Special types (Cohen-Macaulay, Gorenstein, Buchsbaum, etc.) [see also 14M05]

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Bouchiba, Samir (*with* Kabbaj, Salah-Eddine) Tensor products of Cohen-Macaulay rings: solution to a problem of Grothendieck. (English summary) **2003k:13028**
Corso, Alberto (*with* Polini, Claudia; Ulrich, Bernd) Core and residual intersections of ideals. (English summary) **2003b:13035**
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Goto, Shiro (*with* Kim, Mee-Kyoung) Equimultiple good ideals. (English summary) **2003g:13026**
Herzog, Jürgen *see* **Aramova, Annetta et al., 2003m:13020**
Hibi, Takayuki *see* **Aramova, Annetta et al., 2003m:13020**
Kabbaj, Salah-Eddine *see* **Bouchiba, Samir, 2003k:13028**
Kim, Mee-Kyoung *see* **Goto, Shiro, 2003g:13026**
Polini, Claudia *see* **Corso, Alberto et al., 2003b:13035**
Rosales, J. C. *see* **García-Sánchez, P. A., 2003c:13015**
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Brodmann, Markus P. (*with* Sharp, Rodney Y.) On the dimension and multiplicity of local cohomology modules. (English summary) **2003g:13022**
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— (*with* Haraikawa, Satoshi) Good ideals in Artinian Gorenstein local rings obtained by idealization. **2003m:13005**
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Haraikawa, Satoshi *see* **Goto, Shiro, 2003m:13005**
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Kemper, Gregor Loci in quotients by finite groups, pointwise stabilizers and the Buchsbaum property. (English summary) **2003i:13006**
Kim, Mee-Kyoung Note on good ideals in Gorenstein local rings. (English summary) **2003h:13005**
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Lesperance, Joshua Gorenstein liaison of some curves in $\mathbb{P}^4$. (English summary) **2003g:14065**
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13H15 Multiplicity theory and related topics [see also 14C17]

Achilles, Rüdiger (*with* Rams, Sławomir) Intersection numbers, Segre numbers and generalized Samuel multiplicities. (English summary) **2003a:13028**
Ciupercă, Cătălin A numerical characterization of the S_2-ification of a Rees algebra. (English summary) **2003j:13033**

D'Cruz, Clare (*with* Verma, J. K.) Hilbert series of fiber cones of ideals with almost minimal mixed multiplicity. (English summary) **2003b:13037**
Debremaeker, R. (*with* Van Lierde, V.) A short proof of the length formula of Hoskin and Deligne. (English summary) **2003c:13016**
Duong Quôc Viêt On some properties of (FC)-sequences of ideals in local rings. (English summary) **2003i:13033**
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Hanes, Douglas Bounds on multiplicities of local rings. (English summary) **2003k:13029**
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Mustaţă, Mircea On multiplicities of graded sequences of ideals. (English summary) **2003k:13030**
Rams, Sławomir On the index of contact and multiplicities for bigraded rings. (English summary) **2003a:13030**
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13J10 Complete rings, completion [see also 13B35]

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13J15 Henselian rings [see also 13B40]

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13Mxx Finite commutative rings {For number-theoretic aspects, see 11Txx.}

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13M10 Polynomials

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13Nxx Differential algebra [see also 12H05, 14F10]

13N05 Modules of differentials

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13P05 Polynomials, factorization [see also 12Y05]

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13P10 Polynomial ideals, Gröbner bases [see also 13F20]

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14C15 Chow groups and rings

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Lee, Sichang Chow groups of complete regular local rings. III. (English summary) **2003d:13020**
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Yagita, Nobuaki Chow rings of classifying spaces of extraspecial p-groups. (English summary) **2003f:55006**
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14C17 Intersection theory, characteristic classes, intersection multiplicities [see also 13H15]

Ernström, Lars (*with* Yokura, Shoji) Bivariant Chern-Schwartz-MacPherson classes with values in Chow groups. (English summary) **2003a:14006**
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— *see also* **Ernström, Lars, 2003a:14006**

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Cygan, Ewa Nullstellensatz and cycles of zeroes of holomorphic mappings. (English summary) **2003d:32008**
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14C20 Divisors, linear systems, invertible sheaves

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Aprodu, Marian On the vanishing of higher syzygies of curves. **2003h:14011**
Ballico, Edoardo On the multiplication map for non-special line bundles on curves. (English summary) **2003b:14010**
— Line bundles on projective curves: the multiplication map. (English and Italian summaries) **2003c:14007**
Beltrametti, M. C. (*with* Chandler, Karen A.; Sommese, Andrew J.) Reducible hyperplane sections. II. (English summary) **2003h:14012**
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Chandler, Karen A. *see* **Beltrametti, M. C. et al., 2003h:14012**
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— Very ample linear systems on blowings-up at general points of smooth projective varieties. (English summary) **2003g:14005**
Fukuma, Yoshiaki A lower bound for $K_X L^2$ of polarized 3-folds (X, L) of general type. **2003a:14009**
Gherardelli, F. A geometric definition of sum for second-order linear series of a genus-two curve. (Italian)
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— (*with* Fontanari, Claudio) On the variety of linear series on a singular curve. (English and Italian summaries) **2003h:14051**
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— (*with* Keem, Changho) Clifford index of smooth algebraic curves of odd gonality with big $W^1_d(C)$. **2003e:14022**
— (*with* Fontanari, Claudio) On algebraic curves whose osculating planes belong to the maximal number of independent linear complexes. (English summary) **2003k:14063**
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14C21 Pencils, nets, webs [see also 53A60]

Park, Seong-Suk Existence of base-point-free pencils of degree $g-1$ on bi-elliptic curves. **2003m:14012**

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Ohbuchi, Akira *see* **Cho, Kyung-Hye et al.**, **2003i:14039**

14C22 Picard groups

Items with secondary classifications in 14C22

Bruinier, Jan Hendrik On the rank of Picard groups of modular varieties attached to orthogonal groups. (English summary) **2003h:11053**
Elizondo, E. Javier (*with* Srinivas, Vasudevan) Some remarks on Chow varieties and Euler-Chow series. **2003c:14008**
Ford, T. J. (*with* Stimets, R.) The Picard group of a general toric variety of dimension three. (English summary) **2003f:14061**
Giuffrida, Salvatore (*with* Maggioni, Renato) The global ring of a smooth projective surface. (English summary) **2003a:14054**
Hansen, Søren Have Picard groups of Deligne-Lusztig varieties—with a view toward higher codimensions. (English summary) **2003g:14068**
Huisman, Johannes On the neutral component of the Jacobian of a real algebraic curve having many components. (English summary) **2003h:14085**
— A group law on smooth real quartics having at least 3 real branches. (English and French summaries) **2003h:14087**
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Monnier, Jean-Philippe Witt group and torsion Picard group of real curves. (English summary) **2003a:11038**
Siksek, Samir Descent on Picard groups using functions on curves. (English summary) **2003g:14041**
Srinivas, Vasudevan *see* **Elizondo, E. Javier**, **2003c:14008**
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14C25 Algebraic cycles

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Collino, Alberto (*with* Fakhruddin, Najmuddin) Indecomposable higher Chow cycles on Jacobians. (English summary) **2003i:14005**
Elizondo, E. Javier (*with* Srinivas, Vasudevan) Some remarks on Chow varieties and Euler-Chow series. **2003c:14008**
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Nagel, Jan A variant of a theorem of C. Voisin. **2003e:14004**
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Cohen, Ralph L. (*with* Lima-Filho, Paulo) Holomorphic K-theory, algebraic co-cycles, and loop groups. (English summary) **2003e:19004**
Fakhruddin, Najmuddin On the Chow groups of supersingular varieties. (English summary) **2003c:14006**
Farkas, Gavril (*with* Gibney, Angela) The Mori cones of moduli spaces of pointed curves of small genus. (English summary) **2003m:14043**
(Fujiwara, Kazuhiro) *see* **Illusie, Luc**, **2003h:14032**
Galluzzi, Federica Abelian fourfold of Mumford-type and Kuga-Satake varieties. (English summary) **2003g:14061**
Gibney, Angela *see* **Farkas, Gavril**, **2003m:14043**
Green, Mark L. (*with* Griffiths, Phillip A.) Abel's differential equations. **2003c:14009**
Griffiths, Phillip A. *see* **Green, Mark L.**, **2003c:14009**
Harris, Bruno Chen's iterated integrals and algebraic cycles. **2003k:32033**
Huckleberry, Alan T. (*with* Wolf, Joseph A.) Cycle spaces of real forms of $\mathrm{SL}_n(\mathbb{C})$. **2003f:32023**
Illusie, Luc An overview of the work of K. Fujiwara, K. Kato, and C. Nakayama on logarithmic étale cohomology. (English summary) **2003h:14032**
Kahn, Bruno *see* **André, Yves[1]**, **2003k:14020**
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Khesin, Boris (*with* Roslyĭ, A. A.) Polar homology and holomorphic bundles. (English summary) **2003d:32020**
Krishna, Amalendu (*with* Srinivas, Vasudevan) Zero-cycles and K-theory on normal surfaces. (English summary) **2003k:14005**
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(Nakayama, C.) *see* **Illusie, Luc**, **2003h:14032**
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Voevodsky, Vladimir Motivic cohomology groups are isomorphic to higher Chow groups in any characteristic. **2003c:14021**
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14C30 Transcendental methods, Hodge theory [see also 14D07, 32G20, 32J25, 32S35], Hodge conjecture

Abdulali, Salman Hodge structures on abelian varieties of type III. (English summary) **2003g:14008**
Asakura, Masanori Arithmetic Hodge structure and nonvanishing of the cycle class of 0-cycles. (English summary) **2003m:14015**
del Baño Rollin, Sebastian On the Hodge theory of the symmetric powers of a curve. (English summary) **2003h:14015**
Bertin, José (*with* Demailly, Jean-Pierre; Illusie, Luc; Peters, Chris) ★ Introduction to Hodge theory. (English summary) **2003g:14009**
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van Geemen, B. (*with* Verra, A.) Quaternionic Pryms and Hodge classes. (English summary) **2003h:14016**
Green, Mark L. (*with* Griffiths, Phillip A.) Abel's differential equations. **2003c:14009**
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Hazama, Fumio General Hodge conjecture for abelian varieties of CM-type. (English summary) **2003e:14005**
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Penacchio, Olivier Structures de Hodge mixtes et faisceaux réflexifs semistables. (English and French summaries) [Mixed Hodge structures and semistable reflexive sheaves] **2003j:14010**
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Ionesei, Gheorghe ★ Notes on gauge theory and Hodge theory. **2003e:32036**
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Lewis, James D. Real regulators on Milnor complexes. (English summary) **2003d:19004**
Nagel, Jan Effective bounds for Hodge-theoretic connectivity. (English summary) **2003b:14008**
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Venkataramana, T. N. On cycles on compact locally symmetric varieties. (English summary) **2003a:14037**
Voisin, Claire A counterexample to the Hodge conjecture extended to Kähler varieties. **2003e:32037**
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14C34 Torelli problem [see also 32G20]

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14C35 Applications of methods of algebraic K-theory [see also 19Exx]

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14C40 Riemann-Roch theorems [see also 19E20, 19L10]

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14Dxx Families, fibrations

14D05 Structure of families (Picard-Lefschetz, monodromy, etc.)

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— Monodromy groups of regular elliptic surfaces. (English summary) **2003e:14036**
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14D07 Variation of Hodge structures [see also 32G20]

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14D10 Arithmetic ground fields (finite, local, global)

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14D15 Formal methods; deformations [see also 13D10, 14B07, 32Gxx]

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14D20 Algebraic moduli problems, moduli of vector bundles {For analytic moduli problems, see 32G13.}

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14D21 Applications of vector bundles and moduli spaces in mathematical physics (twistor theory, instantons, quantum field theory)

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14Exx Birational geometry

14E05 Rational and birational maps

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Coppens, Marc Very ample linear systems on blowings-up at general points of smooth projective varieties. (English summary) **2003g:14005**
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14E07 Birational automorphisms, Cremona group and generalizations

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14E08 Rationality questions

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14E15 Global theory and resolution of singularities [see also 14B05, 32S20, 32S45]

Ban, C. (*with* McEwan, L. J.; Némethi, András) The embedded resolution of $f(x, y) + z^2$: $(\mathbb{C}^3, 0) \to (\mathbb{C}, 0)$. (English summary) **2003a:14016**
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14E20 Coverings [see also 14H30]

Garuti, Marco A. Linear systems attached to cyclic inertia. (English summary) **2003i:14014**
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14E22 Ramification problems [see also 11S15]

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Chen, Bang-Yen Segre embedding and related maps and immersions in differential geometry. (English summary) **2003j:53087**
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14E30 Minimal model program (Mori theory, extremal rays)

Bridgeland, Tom Flops and derived categories. **2003h:14027**
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14E99 None of the above, but in this section

Bădescu, Lucian Semi-affineness and formal functions. (English summary) **2003b:14020**

14Fxx (Co)homology theory [see also 13Dxx]

14F05 Vector bundles, sheaves, related constructions [see also 14H60, 14J60, 18F20, 32Lxx, 46M20]

Brodmann, Markus P. Cohomological invariants of coherent sheaves over projective schemes: a survey. (English summary) **2003b:14021**
Căldăraru, Andrei Derived categories of twisted sheaves on elliptic threefolds. (English summary) **2003a:14022**
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Lomadze, Vakhtang Convolutional codes and coherent sheaves. (English summary) **2003b:94069**
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14F10 Differentials and other special sheaves [see also 13Nxx, 32C38]

Berthelot, Pierre Introduction à la théorie arithmétique des $\mathscr{D}$-modules. (French summary) [Introduction to the arithmetic theory of $\mathscr{D}$-modules] **2003i:14015**
Biswas, Indranil (*with* Raina, Ashok K.) Projective structures on a Riemann surface. III. (English summary) **2003b:14022**
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Brückmann, Peter (*with* Rackwitz, H.-G.) On cohomology of complete intersections with coefficients in the twisted sheaf of differential forms in the case of prime characteristic. (English summary) **2003m:14029**
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Gros, Michel (*with* Narváez Macarro, Luis) Cohomologie évanescente p-adique: calculs locaux. [p-adic vanishing cohomology: local calculations] **2003e:14012**
Hübl, Reinhold Log-resolutions, derivations, and evolutions. (English summary) **2003i:14017**
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Ran, Ziv On semipositivity of sheaves of differential operators and the degree of a unipolar $\mathbb{Q}$-Fano variety. (English summary) **2003m:14062**
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14F17 Vanishing theorems [see also 32L20]

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Kovács, Sándor J. Logarithmic vanishing theorems and Arakelov-Parshin boundedness for singular varieties. (English summary) **2003a:14025**
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14F20 Étale and other Grothendieck topologies and cohomologies

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(Katō, Kazuya) *see* **Illusie, Luc, 2003h:14032**
Kisin, Mark Potential semi-stability of p-adic étale cohomology. (English summary) **2003g:14024**
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Panin, Ivan (*with* Yagunov, Serge) Rigidity for orientable functors. (English summary) **2003e:14014**
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Raynaud, Michel Sur le groupe fondamental d'une courbe complète en caractéristique $p > 0$. (English summary) [The fundamental group of a complete curve of characteristic $p > 0$] **2003h:14039**
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Zink, Thomas On the slope filtration. (English summary) **2003d:14055**

14F22 Brauer groups of schemes [see also 12G05, 16K50]

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14F25 Classical real and complex cohomology

Items with secondary classifications in 14F25

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Gasharov, Vesselin (*with* Reiner, Victor) Cohomology of smooth Schubert varieties in partial flag manifolds. (English summary) **2003i:14064**
Hain, Richard The rational cohomology ring of the moduli space of abelian 3-folds. **2003h:14068**
Kisin, Mark (*with* Lehrer, G. I.) Equivariant Poincaré polynomials and counting points over finite fields. (English summary) **2003b:14023**

Kleinjung, Thorsten ★ Gerahmte gemischte Tate-Motive und die Werte von Zetafunktionen zu Zahlkörpern an den Stellen 2 und 3. (German) [Framed mixed Tate motives and the values of zeta functions for number fields at the places 2 and 3] **2003j:11140**
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14F30 p-adic cohomology, crystalline cohomology

Alon, Gil (*with* de Shalit, Ehud) On the cohomology of Drinfel'd's p-adic symmetric domain. (English summary) **2003i:14019**
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Shiho, Atsushi Crystalline fundamental groups. II. Log convergent cohomology and rigid cohomology. (English summary) **2003c:14020**
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Bannai, Kenichi On the p-adic realization of elliptic polylogarithms for CM-elliptic curves. (English summary) **2003e:11070**
Berthelot, Pierre Introduction à la théorie arithmétique des $\mathscr{D}$-modules. (French summary) [Introduction to the arithmetic theory of $\mathscr{D}$-modules] **2003i:14015**
Besser, Amnon Coleman integration using the Tannakian formalism. (English summary) **2003d:11176**
Christol, Gilles (*with* Mebkhout, Zoghman) Équations différentielles p-adiques et coefficients p-adiques sur les courbes. (French summary) [p-adic differential equations and p-adic coefficients on curves] **2003i:12014**
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Gros, Michel (*with* Narváez Macarro, Luis) Cohomologie évanescente p-adique: calculs locaux. [p-adic vanishing cohomology: local calculations] **2003e:14012**
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Kisin, Mark Potential semi-stability of p-adic étale cohomology. (English summary) **2003g:14024**
Kleinjung, Thorsten ★ Gerahmte gemischte Tate-Motive und die Werte von Zetafunktionen zu Zahlkörpern an den Stellen 2 und 3. (German) [Framed mixed Tate motives and the values of zeta functions for number fields at the places 2 and 3] **2003j:11140**
Matsuda, Shigeki Katz correspondence for quasi-unipotent overconvergent isocrystals. (English summary) **2003j:12007**
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Mochizuki, Shinichi The intrinsic Hodge theory of p-adic hyperbolic curves. **2003a:14035**
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Zink, Thomas On the slope filtration. (English summary) **2003d:14055**
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14F35 Homotopy theory; fundamental groups [see also 14H30]

Hu, Po (*with* Kriz, Igor) The Steinberg relation in $\mathbb{A}^1$-stable homotopy. **2003a:14028**
Katzarkov, Ludmil Schematization of homotopy types and realizations.
— *see also* **de Oliveira, Bruno et al., 2003j:14021**
Kriz, Igor *see* **Hu, Po, 2003a:14028**
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Zuo, Kang[1] ★ Representations of fundamental groups of algebraic varieties. **2003g:14029**

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Golubeva, V. A. On the Riemann-Hilbert problem in a class of Knizhnik-Zamolodchikov equations. (English summary) **2003j:32019**
Kawahara, Yukihito The mixed Hodge structure on the fundamental group of a complement of hyperplanes. (English summary) **2003f:14008**
Shiho, Atsushi Crystalline fundamental groups. II. Log convergent cohomology and rigid cohomology. (English summary) **2003c:14020**
Xu, Xiang The slopes of hyperelliptic surfaces with Z_2-quotient ranks. (Chinese. English and Chinese summaries) **2003b:14045**

14F40 de Rham cohomology [see also 14C30, 32C35, 32L10]

van der Geer, Gerard (*with* Katsura, Toshiyuki) An invariant for varieties in positive characteristic. (English summary) **2003h:14033**
Katsura, Toshiyuki *see* **van der Geer, Gerard, 2003h:14033**
Walther, Uli Algorithmic determination of the rational cohomology of complex varieties via differential forms. (English summary) **2003b:14027**
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Berthelot, Pierre Introduction à la théorie arithmétique des $\mathscr{D}$-modules. (French summary) [Introduction to the arithmetic theory of $\mathscr{D}$-modules] **2003i:14015**
Cailotto, Maurizio Algebraic connections on logarithmic schemes. (English and French summaries) **2003d:14027**
Chiarellotto, Bruno (*with* Le Stum, Bernard) A comparison theorem for weights. **2003b:14025**
Gros, Michel (*with* Narváez Macarro, Luis) Cohomologie évanescente p-adique: calculs locaux. [p-adic vanishing cohomology: local calculations] **2003e:14012**
Grosse-Klönne, Elmar Finiteness of de Rham cohomology in rigid analysis. (English summary) **2003g:14026**
Le Stum, Bernard *see* **Chiarellotto, Bruno, 2003b:14025**
Lorenzon, Pierre Logarithmic Hodge-Witt forms and Hyodo-Kato cohomology. **2003d:14028**
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Tsuji, Takeshi Semi-stable conjecture of Fontaine-Jannsen: a survey. (English summary) **2003g:14028**

14F42 Motivic cohomology

Geisser, Thomas (*with* Levine, Marc) The Bloch-Kato conjecture and a theorem of Suslin-Voevodsky. (English summary) **2003a:14031**
Joshua, Roy Higher intersection theory on algebraic stacks. I. (English summary) **2003k:14019a**
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Kahn, Bruno The Geisser-Levine method revisited and algebraic cycles over a finite field. (English summary) **2003h:14034**
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Voevodsky, Vladimir Motivic cohomology groups are isomorphic to higher Chow groups in any characteristic. **2003c:14021**
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Borghesi, Simone Algebraic Morava K-theories. (English summary) **2003m:55006**
Kahn, Bruno (*with* Sujatha, Ramdorai) Unramified cohomology of quadrics. II. (English summary) **2003a:11036**
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Pedrini, Claudio (*with* Weibel, Charles) The higher K-theory of real curves. (English summary) **2003i:19001**
Spieß, Michael (*with* Szamuely, Tamás) On the Albanese map for smooth quasi-projective varieties. **2003k:14006**
Sujatha, Ramdorai *see* **Kahn, Bruno, 2003a:11036**
Szamuely, Tamás *see* **Spieß, Michael, 2003k:14006**
Voevodsky, Vladimir A possible new approach to the motivic spectral sequence for algebraic K-theory. (English summary) **2003g:55011**
Weibel, Charles *see* **Pedrini, Claudio, 2003i:19001**

14F43 Other algebro-geometric (co)homologies (e.g., intersection, equivariant, Lawson, Deligne (co)homologies)

Alonso Tarrío, Leovigildo (*with* Jeremías López, Ana; Lipman, Joseph) Correction to the paper: "Duality and flat base change on formal schemes" [in *Studies in duality on Noetherian formal schemes and non-Noetherian ordinary schemes*, 3–90, Amer. Math. Soc., Providence, RI, 1999; MR 2000h:14017]. (English summary) **2003i:14021**

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Braden, Tom (*with* MacPherson, Robert D.) From moment graphs to intersection cohomology. (English summary) **2003g:14030**

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Brion, Michel (*with* Joshua, Roy) Vanishing of odd-dimensional intersection cohomology. II. (English summary) **2003i:14022**

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Lyubashenko, Volodymyr V. Tensor products of categories of equivariant perverse sheaves. (French summary) **2003d:14030**

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Merkur′ev, A. S. Algebraic oriented cohomology theories. (English summary) **2003j:14023**

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14G15 Finite ground fields

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14G20 Local ground fields

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14G22 Rigid analytic geometry

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14G25 Global ground fields

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14G50 Applications to coding theory and cryptography [see also 94A60, 94B27, 94B40]

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14H30 Coverings, fundamental group [see also 14E20, 14F35]

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Audin, Michèle Actions hamiltoniennes de tores et jacobiennes généralisées. (English and French summaries) [Torus actions and generalized Jacobians] **2003d:37081**
Avritzer, Dan (*with* Lange, Herbert) Curves of genus 2 and Desargues configurations. **2003h:14081**
Biswas, Indranil (*with* Paranjape, Kapil Hari) The Hodge conjecture for general Prym varieties. (English summary) **2003j:14008**
— Differential operators on a polarized abelian variety. (English summary) **2003f:14051**
Bosch, Siegfried (*with* Lorenzini, Dino) Grothendieck's pairing on component groups of Jacobians. **2003b:14053**
Ciliberto, Ciro (*with* van der Geer, Gerard) The moduli space of abelian varieties and the singularities of the theta divisor. **2003g:14060**
Enge, Andreas Computing discrete logarithms in high-genus hyperelliptic Jacobians in provably subexponential time. (English summary) **2003b:68083**
Fichou, Goulwen Group law on the neutral component of the Jacobian of a real hyperelliptic curve having many real components. (English summary) **2003m:14093**
van Geemen, B. (*with* Verra, A.) Quaternionic Pryms and Hodge classes. (English summary) **2003h:14016**
van der Geer, Gerard *see* **Ciliberto, Ciro**, **2003g:14060**
Gesztesy, Fritz (*with* Holden, Helge) Dubrovin equations and integrable systems on hyperelliptic curves. (English summary) **2003d:37120**
Girard, Martine Géométrie du groupe des points de Weierstrass d'une quartique lisse. (English and French summaries) [Geometry of the group of Weierstrass points of a smooth quartic] **2003c:11069**
Hidalgo, Rubén A. Hyperbolic polygons and real Schottky groups. (English summary) **2003j:30062**
Holden, Helge *see* **Gesztesy, Fritz**, **2003d:37120**
Huisman, Johannes On the neutral component of the Jacobian of a real algebraic curve having many components. (English summary) **2003h:14085**
— A group law on smooth real quartics having at least 3 real branches. (English and French summaries) **2003h:14087**
Kouvidakis, Alexis On some results of Morita and their application to questions of ampleness. (English summary) **2003i:14006**
Lange, Herbert *see* **Avritzer, Dan**, **2003h:14081**
Lorenzini, Dino *see* **Bosch, Siegfried**, **2003b:14053**
Nakajima, Shōichi On automorphism groups of algebraic curves. (English summary) **2003f:14027**
Paranjape, Kapil Hari *see* **Biswas, Indranil**, **2003j:14008**
Pauly, Christian (*with* Previato, Emma) Singularities of 2Θ-divisors in the Jacobian. (English summary) **2003d:14040**
Poonen, Bjorn Computing torsion points on curves. (English summary) **2003k:11104**
Popa, Mihnea Verlinde bundles and generalized theta linear series. (English summary) **2003i:14046**
Previato, Emma *see* **Pauly, Christian**, **2003d:14040**
Smith, Roy Campbell (*with* Varley, Robert) The Prym Torelli problem: an update and a reformulation as a question in birational geometry. **2003j:14011**
Stoll, Michael On the arithmetic of the curves $y^2 = x^l + A$. II. (English summary) **2003d:11090**
Treĭbich, A. Hyperelliptic tangential covers, and finite-gap potentials. (Russian. Russian summary) **2003m:14049**
Trelina, L. A. The height of S-integer points on hyperelliptic curves and the relative rank of Jacobians. (Russian. English and Russian summaries) **2003k:11106**
Vanhaecke, Pol ★ Integrable systems in the realm of algebraic geometry. **2003a:14053**
Varley, Robert *see* **Smith, Roy Campbell**, **2003j:14011**
Verra, A. *see* **van Geemen, B.**, **2003h:14016**
Weng, Annegret Constructing hyperelliptic curves using complex multiplication. **2003m:14048**
Zarkhin, Yu. G. Very simple 2-adic representations and hyperelliptic Jacobians. (English summary) **2003k:11098**

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14H42 Theta functions; Schottky problem [see also 14K25, 32G20]

Pauly, Christian (*with* Previato, Emma) Singularities of 2Θ-divisors in the Jacobian. (English summary) **2003d:14040**
Previato, Emma *see* **Pauly, Christian**, **2003d:14040**

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Bukhshtaber, V. M. (*with* Leĭkin, D. V.) Graded Lie algebras that define hyperelliptic sigma functions. (Russian) **2003k:14031**
Ciliberto, Ciro (*with* van der Geer, Gerard) The moduli space of abelian varieties and the singularities of the theta divisor. **2003g:14060**
Farkas, Hershel M. (*with* Kra, Irwin) ★ Theta constants, Riemann surfaces and the modular group. (English summary) **2003a:11045**
van der Geer, Gerard *see* **Ciliberto, Ciro**, **2003g:14060**
Işik, Ahmet (*with* Konyalioğlu, A. Cihan) A relation between Riemann theta functions and Jacobi theta functions. (English summary) **2003b:14055**
Konyalioğlu, A. Cihan *see* **Işik, Ahmet**, **2003b:14055**
Kra, Irwin *see* **Farkas, Hershel M.**, **2003a:11045**
Leĭkin, D. V. *see* **Bukhshtaber, V. M.**, **2003k:14031**
Matsutani, Shigeki Hyperelliptic solutions of modified Korteweg-de Vries equation of genus g: essentials of the Miura transformation. (English summary) **2003c:37105**
Nakayashiki, Atsushi On the cohomology of theta divisors of hyperelliptic Jacobians. **2003k:14034**
Rosson, Holly J. Theta series of quaternion algebras over function fields. (English summary) **2003f:11176**
Smith, Roy Campbell (*with* Varley, Robert) The Prym Torelli problem: an update and a reformulation as a question in birational geometry. **2003j:14011**
— (*with* Varley, Robert) A Torelli theorem for special divisor varieties X associated to doubly covered curves $\tilde{C}/C$. (English summary) **2003b:14037**
Varley, Robert *see* **Smith, Roy Campbell**, **2003b:14037** *and* **2003j:14011**

14H45 Special curves and curves of low genus

Ballico, Edoardo Trigonal reducible curves. (English summary) **2003g:14044**
Giuffrida, Salvatore (*with* Maggioni, Renato) On the multiplicative structure of the Rao module of space curves lying on a smooth quadric. (English summary) **2003d:14041**
Ide, Manabu (*with* Mukai, Shigeru) Canonical curves of genus eight. (English summary) **2003m:14047**
Iliev, Atanas (*with* Ranestad, Kristian) Canonical curves and varieties of sums of powers of cubic polynomials. (English summary) **2003c:14032**
Maggioni, Renato *see* **Giuffrida, Salvatore**, **2003d:14041**
Mukai, Shigeru *see* **Ide, Manabu**, **2003m:14047**
Păsărescu, Ovidiu Linearly normal curves in $\mathbf{P}^4$ and $\mathbf{P}^5$. (English summary) **2003j:14038**
Ranestad, Kristian *see* **Iliev, Atanas**, **2003c:14032**
Scholten, Jasper (*with* Zhu, Hui June) Families of supersingular curves in characteristic 2. (English summary) **2003i:14038**
Strano, Rosario Hyperplane sections of reducible curves. (English summary) **2003c:14033**
Weng, Annegret Constructing hyperelliptic curves using complex multiplication. **2003m:14048**
Zhu, Hui June *see* **Scholten, Jasper**, **2003i:14038**

Items with secondary classifications in 14H45

Alcantar, Adrián (*with* Reyes-Espinoza, Enrique; Zárate, Leticia) On affine toric curves in positive characteristic. (English summary) **2003g:14067**
Avritzer, Dan (*with* Lange, Herbert) Curves of genus 2 and Desargues configurations. **2003h:14081**
Ballico, Edoardo Space curves not contained in low degree surfaces in positive characteristic. (English summary) **2003a:14044**
Barth, Wolf Even sets of eight rational curves on a $K3$-surface. (English summary) **2003j:14051**
Casnati, Gianfranco (*with* Del Centina, Andrea) A characterization of bielliptic curves and applications to their moduli spaces. (English summary) **2003h:14045**
Del Centina, Andrea *see* **Casnati, Gianfranco**, **2003h:14045**
Gherardelli, F. A geometric definition of sum for second-order linear series of a genus-two curve. (Italian)
Haine, Luc The q-hypergeometric equation, Askey-Wilson type solitons and rational curves with singularities. (English summary) **2003i:33021**
Kamata, Yasuo The algorithm to calculate the period matrix of the curve $x^m + y^n = 1$. (English summary) **2003f:14028**
Kharlamov, Viatcheslav (*with* Kulikov, Vik. S.) Diffeomorphisms, isotopies, and braid monodromy factorizations of plane cuspidal curves. (English and French summaries) **2003c:14047**
Kulikov, Vik. S. *see* **Kharlamov, Viatcheslav**, **2003c:14047**
Lange, Herbert *see* **Avritzer, Dan**, **2003h:14081**
Maeda, Hidetoshi (*with* Sommese, Andrew J.) Very ample vector bundles of curve genus two. (English summary) **2003f:14062**
Oka, Mutsuo[1] (*with* Pho, Duc Tai) Classification of sextics of torus type. (English summary) **2003k:14030**
Ônishi, Yoshihiro Determinant expressions for abelian functions in genus two. (English summary) **2003k:11103**
Orevkov, S. Yu. A new M-curve of degree 8. (Russian) **2003i:14072**
Park, Hyungju Effective computation of singularities of parametric affine curves. (English summary) **2003f:14068**
Pauly, Christian Self-duality of Coble's quartic hypersurface and applications. **2003m:14053**
Pho, Duc Tai *see* **Oka, Mutsuo**[1], **2003k:14030**
Reyes-Espinoza, Enrique *see* **Alcantar, Adrián et al.**, **2003g:14067**
Satgé, Philippe Morphismes d'une courbe de genre 2 vers une courbe de genre 1. (English and French summaries) [Morphisms from a curve of genus two to a curve of genus one] **2003m:14038**
Scholten, Jasper (*with* Zhu, Hui June) Hyperelliptic curves in characteristic 2. **2003d:11089**
Sendra, J. Rafael Normal parametrizations of algebraic plane curves. (English summary) **2003e:14021**
Sommese, Andrew J. *see* **Maeda, Hidetoshi**, **2003f:14062**
Zárate, Leticia *see* **Alcantar, Adrián et al.**, **2003g:14067**
Zhu, Hui June *see* **Scholten, Jasper**, **2003d:11089**

14H50 Plane and space curves

Ballico, Edoardo Space curves not contained in low degree surfaces in positive characteristic. (English summary) **2003a:14044**
— (*with* Orecchia, F.) Reducible projective curves: postulation and hyperplane section. (English summary) **2003g:14045**
Borodzik, Maciej (*with* Żołądek, Henryk) The Pascal theorem and some its generalizations. (English summary) **2003h:14048**
Buckley, Anita (*with* Zompatori, Marina) Linear systems of plane curves with a composite number of base points of equal multiplicity. (English summary) **2003j:14039**
Campillo, Antonio *see* **Gusein-Zade, S. M. et al., 2003b:14038**
Caporaso, Lucia (*with* Sernesi, Edoardo) Recovering plane curves from their bitangents. (English summary) **2003k:14035**
Casnati, Gianfranco (*with* Del Centina, Andrea) On certain loci of smooth degree $d \geq 4$ plane curves with d-flexes. **2003c:14034**
Del Centina, Andrea *see* **Casnati, Gianfranco, 2003c:14034**
Delgado de la Mata, Félix *see* **Gusein-Zade, S. M. et al., 2003b:14038**
Gusein-Zade, S. M. (*with* Delgado de la Mata, Félix; Campillo, Antonio) On the monodromy at infinity of a plane curve and the Poincaré series of its coordinate ring. **2003b:14038**
Homma, Masaaki² (*with* Ohbuchi, Akira) Plane curves with aligned conductors. (English summary) **2003h:14049**
Kaneta, Hitoshi (*with* Marcugini, Stefano; Pambianco, Fernanda) The most symmetric non-singular plane curves. (*see* **2003f:00023**)
Kishimoto, Takashi Projective plane curves whose complements have logarithmic Kodaira dimension one. **2003d:14042**
Kunz, Ernst Konjugierte Durchmesser ebener algebraischer Kurven. (German summary) [Conjugate diameters of plane algebraic curves] **2003k:14036**
Lang, Fred Geometry and group structures of some cubics. (English summary) **2003j:14040**
Levcovitz, Daniel (*with* McCune, Timothy C.) Projectively normal involutive curves. (English summary) **2003j:14041**
Marcugini, Stefano *see* **Kaneta, Hitoshi et al., (2003f:00023)**
Martin-Deschamps, Mireille Minimalité des courbes sous-canoniques. (English and French summaries) [Minimality of subcanonical curves] **2003h:14050**
McCune, Timothy C. *see* **Levcovitz, Daniel, 2003j:14041**
Mignon, Thierry An asymptotic existence theorem for plane curves with prescribed singularities. **2003a:14045**
Naito, Hirotsugu Minimal free resolution of curves of degree 6 or lower in the 3-dimensional projective space. **2003f:14029**
Ohbuchi, Akira *see* **Homma, Masaaki², 2003h:14049**
Orecchia, F. *see* **Ballico, Edoardo, 2003g:14045**
Pambianco, Fernanda *see* **Kaneta, Hitoshi et al., (2003f:00023)**
Sendra, J. Rafael Normal parametrizations of algebraic plane curves. (English summary) **2003e:14021**
Sernesi, Edoardo *see* **Caporaso, Lucia, 2003k:14035**
Tono, Keita Rational unicuspidal plane curves with $\overline{\kappa} = 1$. (*see* **2003a:14001**)
Żołądek, Henryk *see* **Borodzik, Maciej, 2003h:14048**
Zompatori, Marina *see* **Buckley, Anita, 2003j:14039**

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Ballico, Edoardo Embeddings of unreduced curves in projective spaces: postulation and minimal free resolution. (English summary) **2003a:14071**
— Nodes of a general plane projection of a projective curve. (English summary) **2003d:14063**
Beelen, Peter (*with* Pellikaan, Ruud) The Newton polygon of plane curves with many rational points. **2003c:14024**
Birkenhake, Christina (*with* Wilhelm, Hannes) Humbert surfaces and the Kummer plane. (English summary) **2003m:14064**
García-Villalba, L. J. *see* **Rodríguez-Palánquex, M. C. et al., 2003d:14031**
Giuffrida, Salvatore (*with* Maggioni, Renato) On the multiplicative structure of the Rao module of space curves lying on a smooth quadric. (English summary) **2003d:14041**
Hartshorne, Robin Some examples of Gorenstein liaison in codimension three. (English summary) **2003d:14059**
Lesperance, Joshua Gorenstein liaison of some curves in $\mathbb{P}^4$. (English summary) **2003g:14065**
Le Tat, T. Space curves with the expected postulation. (English summary) **2003k:14004**
Libgober, Anatoly Characteristic varieties of algebraic curves. (English summary) **2003e:14008**
Luengo, Ignacio *see* **Rodríguez-Palánquex, M. C. et al., 2003d:14031**
Maggioni, Renato *see* **Giuffrida, Salvatore, 2003d:14041**
Miura, Kei Field theory for function fields of plane quintic curves. (English summary) **2003e:14016**
Mozo-Fernández, Jorge (*with* Munuera Gómez, Carlos) Recognition of polynomial plane curves under affine transformations. (English summary) **2003f:14025**
Munuera Gómez, Carlos *see* **Mozo-Fernández, Jorge, 2003f:14025**
Nakazato, Hiroshi Hyperelliptic algebraic function field associated with certain contraction. (English summary) **2003c:14028**
Neumann, Walter D. (*with* Norbury, Paul) Rational polynomials of simple type. (English summary) **2003f:14010**
Norbury, Paul *see* **Neumann, Walter D., 2003f:14010**
Notari, R. On the computation of Weierstrass gap sequences. (English summary) **2003d:14043**
Pellikaan, Ruud *see* **Beelen, Peter, 2003c:14024**
Rodríguez-Palánquex, M. C. (*with* García-Villalba, L. J.; Luengo, Ignacio) Computing the genus of a class of curves. (English summary) **2003d:14031**
Rojas, Jacqueline (*with* Vainsencher, Israel) Canonical curves in $\mathbb{P}^3$. **2003j:14004**
Szemberg, Tomasz (*with* Tutaj-Gasińska, Halszka) General blow-ups of the projective plane. (English summary) **2003b:14013**
Tutaj-Gasińska, Halszka *see* **Szemberg, Tomasz, 2003b:14013**
Vainsencher, Israel (*with* Xavier, Fernando) A compactification of the space of twisted cubics. (English summary) **2003j:14073**
— *see also* **Rojas, Jacqueline, 2003j:14004**
Wilhelm, Hannes *see* **Birkenhake, Christina, 2003m:14064**
Xavier, Fernando *see* **Vainsencher, Israel, 2003j:14073**

14H51 Special divisors (gonality, Brill-Noether theory)

Ballico, Edoardo (*with* Fontanari, Claudio) Linear series on k-gonal curves. (English and Italian summaries) **2003c:14035**
— Brill-Noether theory for general branched coverings of $\mathbf{P}^1$. (English summary) **2003f:14030**
— Singular bielliptic curves and special linear systems. (English summary) **2003c:14036**
— (*with* Fontanari, Claudio) On the variety of linear series on a singular curve. (English and Italian summaries) **2003h:14051**
— (*with* Homma, Masaaki²; Ohbuchi, Akira) On the order of speciality of a simple, special, and complete linear system on a curve. (English summary) **2003h:14052**
— (*with* Keem, Changho) Clifford index of smooth algebraic curves of odd gonality with big $W^r_d(C)$. **2003e:14022**
Bradlow, Steven B. (*with* García-Prada, Oscar) An application of coherent systems to a Brill-Noether problem. (English summary) **2003h:14053**
Cho, Kyung-Hye (*with* Keem, Changho; Ohbuchi, Akira) Variety of special nets of degree $g-1$ on double coverings of a smooth plane quartic of genus 9. **2003i:14039**
— (*with* Keem, Changho; Ohbuchi, Akira) On the variety of special linear systems of degree $g-1$ on smooth algebraic curves. (English summary) **2003j:14042**
Fontanari, Claudio *see* **Ballico, Edoardo, 2003c:14035** *and* **2003h:14051**
García-Prada, Oscar *see* **Bradlow, Steven B., 2003h:14053**
Gómez, Tomás L. Brill-Noether theory on singular curves and torsion-free sheaves on surfaces. (English summary) **2003j:14043**
Hartshorne, Robin Clifford index of ACM curves in $\mathbb{P}^3$. (English summary) **2003h:14054**
Homma, Masaaki² *see* **Ballico, Edoardo et al., 2003h:14052**
Kato, Takao Martens' dimension theorem for curves of even gonality. (English summary) **2003h:14055**
Keem, Changho *see* **Ballico, Edoardo, 2003c:14022; Cho, Kyung-Hye et al., 2003i:14039** *and* **2003j:14042**
Ohbuchi, Akira *see* **Ballico, Edoardo et al., 2003h:14052; Cho, Kyung-Hye et al., 2003i:14039** *and* **2003j:14042**
Park, Seong-Suk On the variety of special linear series on a general 5-gonal curve. **2003h:14056**
Rosa, Renata (*with* Stöhr, Karl-Otto) Trigonal Gorenstein curves. (English summary) **2003k:14037**
Stöhr, Karl-Otto *see* **Rosa, Renata, 2003k:14037**
Teixidor I Bigas, Montserrat Green's conjecture for the generic r-gonal curve of genus $g \geq 3r-7$. (English summary) **2003a:14046**
Voisin, Claire Green's generic syzygy conjecture for curves of even genus lying on a $K3$ surface. **2003i:14040**

Items with secondary classifications in 14H51

Ballico, Edoardo (*with* Newstead, P. E.) On Clifford's theorem for vector bundles on algebraic curves. (English summary) **2003b:14039**
— Real algebraic curves and real spanned bundles. (English summary) **2003c:14037**
— Gonality and Clifford index for real algebraic curves. (English summary) **2003d:14068**
— On the existence of special stable spanned vector bundles on projective curves. (English summary) **2003g:14048**
— Trigonal reducible curves. (English summary) **2003g:14044**
— Irreducible components of the Brill-Noether loci for stable rank 2 vector bundles on curves. (English summary) **2003i:14044**
Ciliberto, Ciro (*with* Lopez, Angelo Felice) On the number of moduli of extendable canonical curves. (English summary) **2003i:14030**
Fontanari, Claudio Theta loci and deformation theory. (English and Italian summaries) **2003k:14029**
Homma, Masaaki² (*with* Ohbuchi, Akira) Plane curves with aligned conductors. (English summary) **2003h:14049**
Ishii, Naonori Weierstrass gap sets for quadruples of points on compact Riemann surfaces. (English summary) **2003e:14025**
Kim, Seonja On the irreducibility of the family of algebraic curves in complex projective space P^r. (English summary) **2003b:14007**
Logan, Adam The Kodaira dimension of moduli spaces of curves with marked points. (English summary) **2003j:14035**
Lopez, Angelo Felice *see* **Ciliberto, Ciro, 2003i:14030**
Newstead, P. E. *see* **Ballico, Edoardo, 2003b:14039**
Ohbuchi, Akira *see* **Homma, Masaaki², 2003h:14049**
Park, Seong-Suk Existence of base-point-free pencils of degree $g-1$ on bi-elliptic curves. **2003m:14012**

14H52 Elliptic curves [see also 11G05, 11G07, 14Kxx]

Nakazato, Hiroshi (*with* Yamamoto, Junji) Parametrization of an elliptic curve and the Jacobi elliptic functions. (English summary) **2003h:14057**
Polishchuk, Alexander Massey and Fukaya products on elliptic curves. (English summary) **2003h:14058**
Treĭbich, A. Hyperelliptic tangential covers, and finite-gap potentials. (Russian. Russian summary) **2003m:14049**
Yamamoto, Junji *see* **Nakazato, Hiroshi, 2003h:14057**

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Beukers, Frits (*with* Cushman, Richard) The complex geometry of the spherical pendulum. (English summary) **2003a:37092**
Bukhshtaber, V. M. (*with* Leĭkin, D. V.) Graded Lie algebras that define hyperelliptic sigma functions. (Russian) **2003k:14031**

Cushman, Richard *see* **Beukers, Frits**, **2003a:37092**
Gaudry, Pierrick (*with* Schost, Éric) On the invariants of the quotients of the Jacobian of a curve of genus 2. (English summary) **2003e:14020**
— (*with* Hess, Florian; Smart, N. P.) Constructive and destructive facets of Weil descent on elliptic curves. (English summary) **2003b:14032**
Hess, Florian *see* **Gaudry, Pierrick et al.**, **2003b:14032**
Lavrinenko, Tatiana Solving an indeterminate third degree equation in rational numbers. Sylvester and Lucas. (English and French summaries) **2003j:01016**
Laza, Radu (*with* Pfister, Gerhard; Popescu, Dorin) Maximal Cohen-Macaulay modules over the cone of an elliptic curve. (English summary) **2003k:13012**
Leĭkin, D. V. *see* **Bukhshtaber, V. M.**, **2003k:14031**
Mortenson, Eric Supercongruences between truncated ${}_2F_1$ hypergeometric functions and their Gaussian analogs. (English summary) **2003i:11119**
Oka, Mutsuo[1] Elliptic curves from sextics. (English summary) **2003a:14040**
Pfister, Gerhard *see* **Laza, Radu et al.**, **2003k:13012**
Polishchuk, Alexander Classical Yang-Baxter equation and the A_∞-constraint. (English summary) **2003d:16051**
Popescu, Dorin *see* **Laza, Radu et al.**, **2003k:13012**
Schost, Éric *see* **Gaudry, Pierrick**, **2003e:14020**
Smart, N. P. *see* **Gaudry, Pierrick et al.**, **2003b:14032**
(Sylvester, James Joseph) *see* **Lavrinenko, Tatiana**, **2003j:01016**
Verrill, Helena A. Picard-Fuchs equations of some families of elliptic curves. (English summary) **2003k:11065**
Weber, Matthias[2] Period quotient maps of meromorphic 1-forms and minimal surfaces on tori. (English summary) **2003a:53011**

14H55 Riemann surfaces; Weierstrass points; gap sequences [see also 30Fxx]

Ballico, Edoardo Weierstrass points and Weierstrass pairs on algebraic curves. (English summary) **2003k:14038**
Bujalance, Emilio (*with* Conder, M. D. E.; Gamboa, J. M.; Gromadzki, Grzegorz; Izquierdo, Milagros) Double coverings of Klein surfaces by a given Riemann surface. (English summary) **2003e:14023**
de Carvalho, Cícero Fernandes Weierstrass gaps and curves on a scroll. (English summary) **2003e:14024**
Casnati, Gianfranco (*with* Del Centina, Andrea) On certain loci of curves of genus $g \geq 4$ with Weierstrass points whose first non-gap is three. **2003f:14031**
Chueshev, V. V. (*with* Yakubov, È. Kh.) Weierstrass multiplicative points on a compact Riemann surface. (Russian. Russian summary) **2003i:14041**
Conder, M. D. E. *see* **Bujalance, Emilio et al.**, **2003e:14023**
Coppens, Marc (*with* Gatto, Letterio) Limit Weierstrass schemes on stable curves with 2 irreducible components. (English and Italian summaries) **2003a:14047**
Del Centina, Andrea *see* **Casnati, Gianfranco**, **2003f:14031**
Furuichi, Shigeru *see* **Kawasaki, Masumi**, **2003i:14042**
Gamboa, J. M. *see* **Bujalance, Emilio et al.**, **2003e:14023**
Gatto, Letterio *see* **Coppens, Marc**, **2003a:14047**
Gromadzki, Grzegorz *see* **Bujalance, Emilio et al.**, **2003e:14023**
Ishii, Naonori Weierstrass gap sets for quadruples of points on compact Riemann surfaces. (English summary) **2003e:14025**
Izquierdo, Milagros *see* **Bujalance, Emilio et al.**, **2003e:14023**
Kawasaki, Masumi (*with* Furuichi, Shigeru) On Weierstrass points of a certain family of Riemann surfaces. (English summary) **2003i:14042**
Kim, Seon Jeong (*with* Komeda, Jiryo) Non-cyclic Weierstrass semigroups. (English summary) **2003h:14059**
— (*with* Komeda, Jiryo) Weierstrass semigroups of a pair of points whose first nongaps are three. (English summary) **2003i:14043**
Komatsu, Toru On flower-tree dessins and their Belyi functions. (Japanese)
Komeda, Jiryo *see* **Kim, Seon Jeong**, **2003h:14059** *and* **2003i:14043**
Medeiros, Nivaldo On canonical curves and osculating spaces. (English summary) **2003f:14032**
Muciño-Raymundo, Jesús Riemann surfaces and Belyĭ functions. (Spanish)
Notari, R. On the computation of Weierstrass gap sequences. (English summary) **2003d:14043**
Yakubov, È. Kh. *see* **Chueshev, V. V.**, **2003i:14041**

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Arezzo, Claudio (*with* Micallef, Mario J.; Pirola, Gian Pietro) Stable minimal surfaces of finite total curvature. **2003c:53012**
Biswas, Indranil Coupled connections on a compact Riemann surface. (English summary) **2003m:14052**
Brooks, Robert Wolfe (*with* Makover, Eran) Belyi surfaces. **2003i:30064**
Bujalance, Emilio (*with* Cirre, Francisco-Javier; Gamboa, J. M.; Gromadzki, Grzegorz) Symmetry types of hyperelliptic Riemann surfaces. (English and French summaries) **2003d:30056**
— (*with* Turbek, Peter) Asymmetric and pseudo-symmetric hyperelliptic surfaces. (English summary) **2003h:30056**
— (*with* Cirre, Francisco-Javier; Conder, M. D. E.) On extendability of group actions on compact Riemann surfaces. (English summary) **2003k:20079**
Casnati, Gianfranco (*with* Del Centina, Andrea) On certain loci of smooth degree $d \geq 4$ plane curves with d-flexes. **2003c:14034**
Chen, Yang[1] (*with* Grava, Tamara) Eigenvalue correlations on hyperelliptic Riemann surfaces. (English summary) **2003f:78011**
Chueshev, V. V. Periods of harmonic Prym differentials on a compact Riemann surface. (Russian. Russian summary) **2003h:30055**
Cirre, Francisco-Javier *see* **Bujalance, Emilio et al.**, **2003d:30056** *and* **2003k:20079**
Conder, M. D. E. *see* **Bujalance, Emilio et al.**, **2003k:20079**
Del Centina, Andrea *see* **Casnati, Gianfranco**, **2003c:14034**
Esteves, Eduardo (*with* Medeiros, Nivaldo) Limit canonical systems on curves with two components. (English summary) **2003e:14017**
Gamboa, J. M. *see* **Bujalance, Emilio et al.**, **2003d:30056**
Girard, Martine Groupe des points de Weierstrass sur une famille de quartiques lisses. [Group of Weierstrass points on a family of smooth quartics] **2003h:11067**
Girondo, Ernesto (*with* González-Diez, Gabino) Genus two extremal surfaces: extremal discs, isometries and Weierstrass points. (English summary) **2003k:57020**
González-Diez, Gabino *see* **Girondo, Ernesto**, **2003k:57020**
Grava, Tamara *see* **Chen, Yang**[1], **2003f:78011**
Gromadzki, Grzegorz *see* **Bujalance, Emilio et al.**, **2003d:30056**
Homma, Masaaki[2] (*with* Kim, Seon Jeong) Goppa codes supported by two points on a curve. **2003i:14028**
Kawazumi, Nariya Weierstrass points and Morita-Mumford classes on hyperelliptic mapping class groups. (English summary) **2003h:57024**
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Kimura, Hideyuki Finite group actions on compact Riemann surfaces of genus 4. (*see* **2003f:00023**)
Makover, Eran *see* **Brooks, Robert Wolfe**, **2003i:30064**
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Micallef, Mario J. *see* **Arezzo, Claudio et al.**, **2003c:53012**
Natanzon, Sergei Hurwitz spaces. **2003f:30053**
— (*with* Shapiro, Boris Zalmanovich; Vaĭnshteĭn, A. D.) Topological classification of generic real rational functions. (English summary) **2003j:57030**
Pirola, Gian Pietro A remark about minimal surfaces with flat embedded ends. (Italian summary) **2003c:53017**
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Shapiro, Boris Zalmanovich *see* **Natanzon, Sergei et al.**, **2003j:57030**
Streit, M. Period matrices and representation theory. **2003e:14019**
Turbek, Peter *see* **Bujalance, Emilio**, **2003h:30056**
Vaĭnshteĭn, A. D. *see* **Natanzon, Sergei et al.**, **2003j:57030**
Weaver, Anthony Genus spectra for split metacyclic groups. (English summary) **2003c:20061**
— Automorphisms of surfaces. (English summary) **2003f:20086**
Zvonkin, Alexander Megamaps: construction and examples. (English summary) **2003d:14036**

14H60 Vector bundles on curves and their moduli [see also 14D20, 14F05]

Azad, Hassan (*with* Biswas, Indranil) On holomorphic principal bundles over a compact Riemann surface admitting a flat connection. (English summary) **2003g:14046**
Balaji, Vikraman (*with* Seshadri, C. S.) Semistable principal bundles. I. Characteristic zero. **2003m:14050**
Ballico, Edoardo (*with* Newstead, P. E.) On Clifford's theorem for vector bundles on algebraic curves. (English summary) **2003b:14039**
— On the rationality of certain strata of the Lange stratification of stable vector bundles on curves. (English summary) **2003a:14048**
— Stable and simple vector bundles over a double structure on a smooth curve. (English summary) **2003a:14049**
— Real algebraic curves and real spanned bundles. (English summary) **2003c:14037**
— (*with* Russo, Barbara) Families of maximal subbundles of stable vector bundles on curves. (English summary) **2003c:14038**
— Maximal degree subsheaves of torsion free sheaves on singular projective curves. (English summary) **2003b:14040**
— (*with* Russo, Barbara) Maps between stable vector bundles on a smooth curve. (English summary) **2003j:14044**
— A cancellation problem for vector bundles on curves. (English summary) **2003c:14039**
— Degeneration of a coherent sheaf. (English summary) **2003g:14047**
— On the existence of special stable spanned vector bundles on projective curves. (English summary) **2003g:14048**
— Holomorphic vector bundles and their sections with prescribed poles on Riemann surfaces. (English summary) **2003m:14051**
— Irreducible components of the Brill-Noether loci for stable rank 2 vector bundles on curves. (English summary) **2003i:14044**
del Baño Rollin, Sebastian On the motive of moduli spaces of rank two vector bundles over a curve. (English summary) **2003f:14033**
Biswas, Indranil A criterion for the existence of a flat connection on a parabolic vector bundle. (English summary) **2003f:14034**
— (*with* Brambila-Paz, L.; Gómez, Tomás L.; Newstead, P. E.) Stability of the Picard bundle. (English summary) **2003e:14026**
— Differential operators and immersions of a Riemann surface into a Grassmannian. (English summary) **2003a:14050**
— Coupled connections on a compact Riemann surface. (English summary) **2003m:14052**
— *see also* **Azad, Hassan**, **2003g:14046**
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Braverman, Alexander (*with* Finkelberg, M. V.; Gaitsgory, D.; Mirković, I.) Intersection cohomology of Drinfeld's compactifications. (English summary) **2003h:14060**
Brivio, Sonia On the degeneracy locus of a map of vector bundles on Grassamannian varieties. (English summary) [On the degeneracy locus of a map of vector bundles on Grassmannian varieties] **2003i:14045**
Cilleruelo, Javier (*with* Sols, Ignacio) The Severi bound on sections of rank two semistable bundles on a Riemann surface. (English summary) **2003f:14035**
Finkelberg, M. V. *see* **Braverman, Alexander et al.**, **2003h:14060**
Friedman, Robert David (*with* Morgan, John W.) On the converse to a theorem of Atiyah and Bott. (English summary) **2003b:14041**
Gaitsgory, D. *see* **Braverman, Alexander et al.**, **2003h:14060**
Gómez, Tomás L. *see* **Biswas, Indranil et al.**, **2003e:14026**
Gothen, Peter B. Topology of U(2, 1) representation spaces. (English summary) **2003f:14036**

Hoffmann, Norbert ★ On vector bundles over algebraic and arithmetic curves. **2003h:14061**
Kiem, Young-Hoon The stringy E-function of the moduli space of rank 2 bundles over a Riemann surface of genus 3. (English summary) **2003j:14045**
Laszlo, Y. (*with* Pauly, Christian) The action of the Frobenius maps on rank 2 vector bundles in characteristic 2. (English summary) **2003a:14051**
Mehta, Vikram Bhagvandas (*with* Subramanian, Swaminathan) Principal bundles on the projective line. (English summary) **2003f:14037**
Mercat, Vincent Clifford's theorem and higher rank vector bundles. (English summary) **2003j:14046**
Mersmann, Gerd ★ Algebraische und kombinatorische Aspekte der Harder-Narasimhan-Rekursion und ihrer Umkehrung. (German) [Algebraic and combinatorial aspects of the Harder-Narasimhan recursion and its inverse] **2003k:14039**
Mirković, I. *see* **Braverman, Alexander et al., 2003h:14060**
Morgan, John W. *see* **Friedman, Robert David, 2003b:14041**
Mukai, Shigeru Geometry of the Verlinde formula. (Japanese)
Newstead, P. E. *see* **Ballico, Edoardo, 2003b:14039** *and* **Biswas, Indranil et al., 2003e:14026**
Pauly, Christian Self-duality of Coble's quartic hypersurface and applications. **2003m:14053**
— *see also* **Laszlo, Y., 2003a:14051**
Popa, Mihnea Verlinde bundles and generalized theta linear series. (English summary) **2003i:14046**
Russo, Barbara *see* **Ballico, Edoardo, 2003c:14038** *and* **2003j:14044**
Seshadri, C. S. *see* **Balaji, Vikraman, 2003m:14050**
Sols, Ignacio *see* **Cilleruelo, Javier, 2003f:14035**
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Takeda, Yoshifumi (*with* Yokogawa, Kôji) Pre-Tango structures on curves. (English summary) **2003e:14027**
Tan, Xiao Jiang Some remarks on maximal line subbundles of rank-two vector bundles. (Chinese. English and Chinese summaries) **2003d:14044**
— Brill-Noether matrix for rank two vector bundles. (English summary) **2003k:14040**
Teodorescu, Titus Principal bundles over chains or cycles of rational curves. **2003d:14045**
Yokogawa, Kôji *see* **Takeda, Yoshifumi, 2003e:14027**

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Balaji, Vikraman (*with* Parameswaran, A. J.) Semistable principal bundles. II. Positive characteristics. (English summary) **2003m:14020**
Ballico, Edoardo Secant varieties of scrolls. (English summary) **2003h:14077**
— Vector bundles on elliptic curves over a discrete valuation ring. (English summary) **2003m:14040**
Ben-Zvi, David (*with* Frenkel, Edward) Spectral curves, opers and integrable systems. (English summary) **2003j:14047**
Bradlow, Steven B. (*with* García-Prada, Oscar) An application of coherent systems to a Brill-Noether problem. (English summary) **2003h:14053**
Esteves, Eduardo Compactifying the relative Jacobian over families of reduced curves. (English summary) **2003b:14036**
Frenkel, Edward Vertex algebras and algebraic curves. **2003f:17037**
— (*with* Gaitsgory, D.; Vilonen, Kari) On the geometric Langlands conjecture. **2003a:11145**
— *see also* **Ben-Zvi, David, 2003j:14047**
Friedman, Robert David (*with* Morgan, John W.) Holomorphic principal bundles over elliptic curves. II. The parabolic construction. (English summary) **2003i:14008**
Gaitsgory, D. *see* **Frenkel, Edward et al., 2003a:11145**
García-Prada, Oscar *see* **Bradlow, Steven B., 2003h:14053**
Jost, Jürgen (*with* Zuo, Kang[1]) Arakelov type inequalities for Hodge bundles over algebraic varieties. I. Hodge bundles over algebraic curves. (English summary) **2003b:14016**
Krichever, Igor Moiseevich Vector bundles and Lax equations on algebraic curves. (English summary) **2003m:14054**
Lee, Min Ho[1] Jacobi-like forms and power series bundles. (English summary) **2003h:11048**
Lenzing, Helmut (*with* Meltzer, Hagen) Exceptional sequences determined by their Cartan matrix. (English summary) **2003g:16012**
Lysenko, S. A. Local geometrized Rankin-Selberg method for $\mathrm{GL}(n)$. (English summary) **2003a:11146**
Markman, Eyal (*with* Xia, Eugene Z.) The moduli of flat $\mathrm{PU}(p,p)$-structures with large Toledo invariants. (English summary) **2003i:14009**
Martin-Deschamps, Mireille Minimalité des courbes sous-canoniques. (English and French summaries) [Minimality of subcanonical curves] **2003h:14050**
Meltzer, Hagen *see* **Lenzing, Helmut, 2003g:16012**
Morgan, John W. *see* **Friedman, Robert David, 2003i:14008**
Parameswaran, A. J. *see* **Balaji, Vikraman, 2003m:14020**
Pati, Vishwambhar Unitary tridiagonalization in $M(4,\mathbb{C})$. (English summary) **2003k:15011**
Pauly, Christian (*with* Previato, Emma) Singularities of 2Θ-divisors in the Jacobian. (English summary) **2003d:14040**
Previato, Emma *see* **Pauly, Christian, 2003d:14040**
Roche, Philippe (*with* Szenes, András) Trace functionals on noncommutative deformations of moduli spaces of flat connections. (English summary) **2003g:53161**
Savin, Valentin Sur la stabilité du fibré de Picard. (English and French summaries) [On the stability of the Picard bundle] **2003g:14014**
Schork, Matthias The bc-system of higher rank revisited. (English summary) **2003e:14028**
— On the current of chiral fermions of higher rank. (English summary) **2003g:81225**
Sheinman, O. K. A fermionic model of representations of affine Krichever-Novikov algebras. (Russian. Russian summary) **2003h:17011**
Smith, Roy Campbell (*with* Varley, Robert) A Torelli theorem for special divisor varieties X associated to doubly covered curves $\widetilde{C}/C$. (English summary) **2003b:14037**
Szenes, András *see* **Roche, Philippe, 2003g:53161**
Thaddeus, Michael Variation of moduli of parabolic Higgs bundles. (English summary) **2003a:14014**
Varley, Robert *see* **Smith, Roy Campbell, 2003b:14037**
Vilonen, Kari *see* **Frenkel, Edward et al., 2003a:11145**
Xia, Eugene Z. *see* **Markman, Eyal, 2003i:14009**
Zuo, Kang[1] *see* **Jost, Jürgen, 2003b:14016**

14H70 Relationships with integrable systems

Belokolos, E. D. (*with* Enolskii, V. Z.) Reduction of abelian functions and algebraically integrable systems. I. **2003c:14040**
Ben-Zvi, David (*with* Frenkel, Edward) Spectral curves, opers and integrable systems. (English summary) **2003j:14047**
Enolskii, V. Z. *see* **Belokolos, E. D., 2003c:14040**
Frenkel, Edward *see* **Ben-Zvi, David, 2003j:14047**
Hurtubise, J. C. (*with* Markman, Eyal) Calogero-Moser systems and Hitchin systems. (English summary) **2003a:14052**
Krichever, Igor Moiseevich Vector bundles and Lax equations on algebraic curves. (English summary) **2003m:14054**
Markman, Eyal *see* **Hurtubise, J. C., 2003a:14052**
Previato, Emma Reduction theory, elliptic solitons and integrable systems. (English summary) **2003h:14062**
Vanhaecke, Pol ★ Integrable systems in the realm of algebraic geometry. **2003a:14053**

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Items with secondary classifications in 14H70

Abenda, Simonetta Geometry and dynamics of hyperelliptically separable systems. (English summary) **2003d:37080**
Audin, Michèle Hamiltonian monodromy via Picard-Lefschetz theory. (English summary) **2003g:37098**
Braden, H. W. (*with* Gorskiĭ, A. S.; Odesskiĭ, A. V.; Rubtsov, Vladimir) Double-elliptic dynamical systems from generalized Mukai-Sklyanin algebras. (English summary) **2003m:81097**
Deconinck, Bernard (*with* Segur, Harvey) Pole dynamics for elliptic solutions of the Korteweg-de Vries equation. (English summary) **2003i:37073**
Faye, Ibrahima Semi-abelian surfaces and integrable systems. (English summary) **2003d:37085**
Finkelberg, M. V. (*with* Ginzburg, Victor) Calogero-Moser space and Kostka polynomials. (English summary) **2003m:14070**
Gesztesy, Fritz (*with* Holden, Helge) Dubrovin equations and integrable systems on hyperelliptic curves. (English summary) **2003d:37120**
Ginzburg, Victor *see* **Finkelberg, M. V., 2003m:14070**
Gorskiĭ, A. S. *see* **Braden, H. W. et al., 2003m:81097**
Holden, Helge *see* **Gesztesy, Fritz, 2003d:37120**
Hurtubise, J. C. (*with* Markman, Eyal) Surfaces and the Sklyanin bracket. (English summary) **2003i:14057**
Kamvissis, Spyridon Desingularization of a hyperelliptic curve associated with a doubly periodic Dirac potential. (English summary) **2003g:14040**
Kodama, Yuji[1] (*with* Konopelchenko, Boris G.) Singular sector of the Burgers-Hopf hierarchy and deformations of hyperelliptic curves. (English summary) **2003i:37074**
Konopelchenko, Boris G. *see* **Kodama, Yuji[1], 2003i:37074**
Korotkin, D. A. Isomonodromic deformations and Hurwitz spaces. **2003m:32012**
Kuznetsov, Vadim B. (*with* Vanhaecke, Pol) Bäcklund transformations for finite-dimensional integrable systems: a geometric approach. (English summary) **2003i:37056**
Lin, Shao-Shiung (*with* Roan, Shi-Shyr) Algbraic geometry in discrete quantum integrable model and Baxter's T-Q relation. (English summary) **2003j:82029**
— (*with* Roan, Shi-Shyr) Algebraic geometry and Hofstadter type model. (English summary) **2003g:82037**
Markman, Eyal *see* **Hurtubise, J. C., 2003i:14057**
Matsutani, Shigeki Hyperelliptic loop solitons with genus g: investigations of a quantized elastica. (English summary) **2003h:37127**
— Hyperelliptic solutions of modified Korteweg-de Vries equation of genus g: essentials of the Miura transformation. (English summary) **2003c:37105**
Nakayashiki, Atsushi On the cohomology of theta divisors of hyperelliptic Jacobians. **2003k:14034**
Neeman, Amnon (*with* Shepherd-Barron, N. I.) Automorphisms of the Yang-Baxter equations for the chiral Potts model. (English summary) **2003g:82022**
Oblomkov, A. A. The isoenergy spectral problem for multidimensional difference operators. (Russian. Russian summary) **2003g:47062**
— On the spectral properties of two classes of difference periodic operators. (Russian. Russian summary) **2003g:47061**
Odesskiĭ, A. V. *see* **Braden, H. W. et al., 2003m:81097**
Okounkov, Andrei Generating functions for intersection numbers on moduli spaces of curves. **2003g:14039**
Ol'shanetskiĭ, M. A. Construction of solutions of the periodic Toda lattice by the projection procedure and an algebro-geometric method. (Russian. Russian summary) **2003d:37087**
Piovan, Luis A. (*with* Vanhaecke, Pol) Integrable systems and projective images of Kummer surfaces. (English summary) **2003b:14043**
Roan, Shi-Shyr *see* **Lin, Shao-Shiung, 2003g:82037** *and* **2003j:82029**
Rubtsov, Vladimir *see* **Braden, H. W. et al., 2003m:81097**
Saitō, Masa-Hiko Deformation of Okamoto-Painlevé pairs and Painlevé equations. (English summary) (*see* **2003a:00035**)
Segur, Harvey *see* **Deconinck, Bernard, 2003i:37073**
Shepherd-Barron, N. I. *see* **Neeman, Amnon, 2003g:82022**
Talalaev, D. V. The elliptic Gaudin system with spin. (Russian. Russian summary) **2003g:37129**
Vanhaecke, Pol *see* **Piovan, Luis A., 2003b:14043** *and* **Kuznetsov, Vadim B., 2003i:37056**
Vivolo, Olivier Jacobians of singular spectral curves and completely integrable systems. (English summary) **2003c:37082**

14H81 Relationships with physics

Schork, Matthias The bc-system of higher rank revisited. (English summary) **2003e:14028**

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Abenda, Simonetta Geometry and dynamics of hyperelliptically separable systems. (English summary) **2003d:37080**
Ben-Zvi, David *see* **Frenkel, Edward**, **2003f:17036**
Carfora, Mauro (*with* Marzuoli, Annalisa) Conformal modes in simplicial quantum gravity and the Weil-Petersson volume of moduli space. (English summary) **2003m:83049**
Ferrari, Franco Generalized Weierstrass kernels on the intersection of two complex hypersurfaces. (English summary) **2003k:81176**
Frenkel, Edward (*with* Ben-Zvi, David) ★ Vertex algebras and algebraic curves. (English summary) **2003f:17036**
Hoevenaars, L. K. (*with* Martini, Rodolfo) Generalized WDVV equations for B_r and C_r pure $N = 2$ super-Yang-Mills theory. (English summary) **2003e:81178**
Lin, Shao-Shiung (*with* Roan, Shi-Shyr) Algebraic geometry approach to the Bethe equation for Hofstadter-type models. (English summary) **2003i:82028**
Martini, Rodolfo *see* **Hoevenaars, L. K.**, **2003e:81178**
Marzuoli, Annalisa *see* **Carfora, Mauro**, **2003m:83049**
Roan, Shi-Shyr *see* **Lin, Shao-Shiung**, **2003i:82028**
Schlichenmaier, Martin Elements of a global operator approach to Wess-Zumino-Novikov-Witten models. (English summary) **2003d:81263**
Schork, Matthias On the current of chiral fermions of higher rank. (English summary) **2003g:81225**

14H99 None of the above, but in this section

Ballico, Edoardo (*with* Cossidente, Antonio) Two-strange projective curves. (English summary) **2003k:14041**
Cossidente, Antonio *see* **Ballico, Edoardo**, **2003k:14041**
Pablos Romo, Fernando On the tame symbol of an algebraic curve. (English summary) **2003k:14042**
Recillas-Pishmish, Sevín Canonical mappings of curves. (Spanish)

Items with secondary classifications in 14H99

Ballico, Edoardo Line bundles on projective curves: the multiplication map. (English and Italian summaries) **2003c:14007**
— (*with* Chiarli, Nadia; Greco, Silvio) Linearly normal curves with degenerate general hyperplane section. (English summary) **2003e:14042**
— Postulation of finite unions of lines in projective spaces. (English summary) **2003j:14069**
— Multiple structures on lines. (English summary) **2003d:14006**
— On the minimal free resolution of finite subsets of projective curves. (English summary) **2003h:13016**
— Reducible curves, lines and postulation in projective spaces. (English summary) **2003k:14064**
— Curves with degenerate general hypersurface sections. (English summary) **2003m:14086**
Bukhshtaber, V. M. (*with* Leĭkin, D. V.) The manifold of solutions of the equation $[\partial^2/\partial u_1\partial u_2 - 6\wp_{1,2}(u_1, u_2) + E]\psi = 0$. (Russian) **2003a:37102**
Chiarli, Nadia *see* **Ballico, Edoardo et al.**, **2003e:14042**
Cioffi, Francesca A termination criterion for algorithms that compute algebraic curves via points. (English summary) **2003d:14075**
Greco, Silvio *see* **Ballico, Edoardo et al.**, **2003e:14042**
Knutsen, Andreas Leopold Smooth curves on projective $K3$ surfaces. (English summary) **2003c:14041**
Leĭkin, D. V. *see* **Bukhshtaber, V. M.**, **2003a:37102**
Lenzing, Helmut Twenty-one characterizations of genus zero. (English summary) **2003h:14029**
Schreyer, Frank-Olaf (*with* Tonoli, Fabio) Needles in a haystack: special varieties via small fields.
Tonoli, Fabio *see* **Schreyer, Frank-Olaf**

14Jxx Surfaces and higher-dimensional varieties {For analytic theory, see 32Jxx.}

14J10 Families, moduli, classification: algebraic theory

Allcock, Daniel The moduli space of cubic threefolds. (English summary) **2003k:14043**
Kondō, Shigeyuki The moduli space of Enriques surfaces and Borcherds products. (English summary) **2003m:14055**
— Borcherds products and algebraic geometry. (Japanese)
Lee, Yongnam Bounds and $\mathbb{Q}$-Gorenstein smoothings of smoothable stable log surfaces. (English summary) **2003i:14047**
McQuillan, Michael An introduction to non-commutative Mori theory. (English summary) **2003j:14048**

Items with secondary classifications in 14J10

Allcock, Daniel (*with* Carlson, James A.; Toledo, Domingo) The complex hyperbolic geometry of the moduli space of cubic surfaces. (English summary) **2003m:32011**
Al-Rhayyel, Ahmad Elliptic surfaces over a genus 1 curve with exactly the pair (I_2, I_{10}) of singular fibers. (English summary) **2003h:14064**
Baily, Walter L., Jr. Moduli of certain Fano 4-folds. (English summary) **2003c:14044**
Bauer, Ingrid C. Surfaces with $K^2 = 7$ and $p_g = 4$. (English summary) **2003b:14044**
— (*with* Catanese, Fabrizio; Pignatelli, Roberto) Canonical rings of surfaces whose canonical system has base points. **2003m:14057**
Bonavero, Laurent (*with* Campana, Frédéric; Wiśniewski, Jarosław A.) Variétés complexes dont l'éclatée en un point est de Fano. (English and French summaries) [Complex manifolds whose blow-up at a point is Fano] **2003d:14053**
Campana, Frédéric *see* **Bonavero, Laurent et al.**, **2003d:14053**
Carlson, James A. *see* **Allcock, Daniel et al.**, **2003m:32011**
Catanese, Fabrizio *see* **Bauer, Ingrid C. et al.**, **2003m:14057**
Chiantini, Luca (*with* Ciliberto, Ciro) Weakly defective varieties. (English summary) **2003b:14063**
Ciliberto, Ciro *see* **Chiantini, Luca**, **2003b:14063**
Kim, Bumsig (*with* Kresch, Andrew; Pantev, Tony) Functoriality in intersection theory and a conjecture of Cox, Katz, and Lee. (English summary) **2003m:14088**
Kovács, Sándor J. Logarithmic vanishing theorems and Arakelov-Parshin boundedness for singular varieties. (English summary) **2003a:14025**
Kresch, Andrew *see* **Kim, Bumsig et al.**, **2003m:14088**
Matsuda, Osamu Birational classification of curves on irrational ruled surfaces. **2003d:14017**
Oguiso, Keiji Seshadri constants in a family of surfaces. (English summary) **2003e:14003**
Pantev, Tony *see* **Kim, Bumsig et al.**, **2003m:14088**
Pignatelli, Roberto *see* **Bauer, Ingrid C. et al.**, **2003m:14057**
Sasaki, Takeshi (*with* Yoshida, Masaaki) Schwarzian derivatives and uniformization. **2003i:34202**
Teicher, Mina Braid monodromy type invariants of surfaces and 4-manifolds. (English summary) **2003c:14048**
Toledo, Domingo *see* **Allcock, Daniel et al.**, **2003m:32011**
Viehweg, Eckart Positivity of direct image sheaves and applications to families of higher dimensional manifolds. (English summary) **2003f:14024**
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14J15 Moduli, classification: analytic theory; relations with modular forms [see also 32G13]

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14J17 Singularities [see also 14B05, 14E15]

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14J20 Arithmetic ground fields [see also 11Dxx, 11G25, 11G35, 14Gxx]

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14J25 Special surfaces {For Hilbert modular surfaces, see 14G35.}

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14J26 Rational and ruled surfaces

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Calabri, Alberto On rational and ruled double planes. (English summary) **2003j:14049**
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14J27 Elliptic surfaces

Al-Rhayyel, Ahmad Elliptic surfaces over a genus 1 curve with exactly the pair (I_2, I_{10}) of singular fibers. (English summary) **2003h:14064**
Ito, Hiroyuki² On extremal elliptic surfaces in characteristic 2 and 3. (English summary) **2003g:14050**
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Suzuki, Kaori On Morrison's cone conjecture for klt surfaces with $K_X \equiv 0$. (English summary) **2003a:14061**
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14J28 $K3$ surfaces and Enriques surfaces

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Belcastro, Sarah Marie Picard lattices of families of $K3$ surfaces. (English summary) **2003d:14048**
Chen, Xi² A simple proof that rational curves on $K3$ are nodal. **2003k:14047**
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Suzuki, Kaori On Morrison's cone conjecture for klt surfaces with $K_X \equiv 0$. (English summary) **2003a:14061**
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14J29 Surfaces of general type

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Borrelli, Giuseppe On regular surfaces of general type with $p_g = 2$ and non-birational bicanonical map. (English summary) **2003k:14049**
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— (*with* Pardini, Rita; Tovena, Francesca) Regular canonical covers. (English summary) **2003k:14050**
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14J30 3-folds

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14J32 Calabi-Yau manifolds, mirror symmetry

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14J35 4-folds

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14J40 n-folds ($n > 4$)

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14J50 Automorphisms of surfaces and higher-dimensional varieties

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14J60 Vector bundles on surfaces and higher-dimensional varieties, and their moduli [see also 14D20, 14F05, 32Lxx]

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14J70 Hypersurfaces

Wang, Lih-Chung Divisors of generic hypersurfaces of general type. (English summary) **2003j:14059**

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14J80 Topology of surfaces (Donaldson polynomials, Seiberg-Witten invariants)

Joe, Dosang (*with* Kim, Minhyong) On the topology of algebraic surfaces and reduction modulo p. **2003e:14035**
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Lönne, Michael Monodromy groups of regular elliptic surfaces. (English summary) **2003e:14036**
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Finashin, Sergeĭ Knotting of algebraic curves in CP^2. (English summary) **2003c:57042**
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Göttsche, Lothar Hilbert schemes of points on surfaces. (English summary) **2003j:14003**
Katzarkov, Ludmil *see* **Bogomolov, Fedor et al., 2003k:57030**
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Morgan, John W. Seiberg-Witten invariants. (English and French summaries) **2003a:57057**
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Teleman, Andrei Dumitru *see* **Okonek, Ch., 2003g:57048**

14J81 Relationships with physics

Items with secondary classifications in 14J81

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Aspinwall, Paul S. Compactification, geometry and duality: $N = 2$. (English summary) **2003j:81132**
— (*with* Lawrence, Albion) Derived categories and zero-brane stability. (English summary) **2003a:81181**
Blumenhagen, Ralph (*with* Braun, Volker; Lüst, Dieter; Körs, Boris) Orientifolds of $K3$ and Calabi-Yau manifolds with intersecting D-branes. (English summary) **2003j:81137**
Bonelli, Giulio The M5-brane on $K3$ and del Pezzo's and multi-loop string amplitudes. (English summary) **2003b:81151**
Braun, Volker *see* **Blumenhagen, Ralph et al., 2003j:81137**
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Candelas, Philip (*with* Diaconescu, Duiliu-Emanuel; Florea, Bogdan; Morrison, David R.; Rajesh, Govindan) Codimension-three bundle singularities in F-theory. (English summary) **2003j:81141**
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Eguchi, Tohru (*with* Sakai, Kazuhiro[2]) Seiberg-Witten curve for the E-string theory. (English summary) **2003k:81175**
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Ito, Katsushi (*with* Kunitomo, Hiroshi) Hybrid superstrings on singular Calabi-Yau fourfolds. (English summary) **2003d:81235**
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Walcher, Johannes *see* **Kaste, Peter et al., 2003a:81156**
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14J99 None of the above, but in this section

Ciliberto, Ciro Geometric aspects of polynomial interpolation in more variables and of Waring's problem. (English summary) **2003i:14058**
— (*with* Hulek, Klaus) A bound on the irregularity of abelian scrolls in projective space. (English summary) **2003f:14049**
Hulek, Klaus *see* **Ciliberto, Ciro, 2003f:14049**

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Ballico, Edoardo (*with* Chiantini, Luca) Imposing singular points and many nodes to curves on surfaces. (English summary) **2003b:14034**
Chiantini, Luca *see* **Ballico, Edoardo, 2003b:14034**
Katzarkov, Ludmil *see* **de Oliveira, Bruno et al., 2003j:14021**
Kebekus, Stefan Families of singular rational curves. (English summary) **2003e:14011**
Masuda, Kayo *see* **Miyanishi, M., 2003c:14051**
Miyanishi, M. (*with* Masuda, Kayo) Open algebraic surfaces with finite group actions. (English summary) **2003c:14051**
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de Oliveira, Bruno (*with* Katzarkov, Ludmil; Ramachandran, Mohan) Deformations of large fundamental groups. **2003j:14021**
Ramachandran, Mohan *see* **de Oliveira, Bruno et al., 2003j:14021**
Rashid, Laila E. M. A sharp Castelnuovo bound for the normalization of certain projective surfaces. **2003b:14012**
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Yamada, Yasuhiko *see* **Mizoguchi, Shun'ya, 2003g:81205**

14Kxx Abelian varieties and schemes

14K02 Isogeny

Silverberg, Alice (*with* Zarkhin, Yu. G.) Polarizations on abelian varieties. **2003h:14067**
Zarkhin, Yu. G. *see* **Silverberg, Alice, 2003b:14067**

Items with secondary classifications in 14K02

Barcau, Mugurel (*with* Buium, Alexandru) Siegel differential modular forms. **2003g:11044**
Buium, Alexandru *see* **Barcau, Mugurel, 2003g:11044**

14K05 Algebraic theory

Hidalgo-Solis, Laura An introduciton to abelian varieties. (Spanish. Spanish summary)
Khaled, Abdelhamid On the inverse formula. **2003g:14058**

Items with secondary classifications in 14K05

Conrad, Brian A modern proof of Chevalley's theorem on algebraic groups. (English summary) **2003f:20078**
Joglar-Prieto, Nuria (*with* Kollár, János) Real abelian varieties with many line bundles. (English summary) **2003j:14076**
Joshi, Kirti (*with* Rajan, C. S.) Frobenius splitting and ordinarity. **2003i:14023**
Kollár, János *see* **Joglar-Prieto, Nuria, 2003j:14076**
Kontsevich, Maxim (*with* Soibelman, Yan) Homological mirror symmetry and torus fibrations. **2003c:32025**
Polishchuk, Alexander (*with* Rothstein, Mitchell J.) Fourier transform for D-algebras. I. (English summary) **2003d:14004**
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Zarkhin, Yu. G. Very simple 2-adic representations and hyperelliptic Jacobians. (English summary) **2003k:11098**

14K10 Algebraic moduli, classification [see also 11G15]

Alexeev, Valery Complete moduli in the presence of semiabelian group action. (English summary) **2003g:14059**
Birkenhake, Christina (*with* Wilhelm, Hannes) Humbert surfaces and the Kummer plane. (English summary) **2003m:14064**
Ciliberto, Ciro (*with* van der Geer, Gerard) The moduli space of abelian varieties and the singularities of the theta divisor. **2003g:14060**
Esnault, Hélène (*with* Viehweg, Eckart) Chern classes of Gauss-Manin bundles of weight 1 vanish. (English summary) **2003i:14059**
van der Geer, Gerard *see* **Ciliberto, Ciro, 2003g:14060**
Hain, Richard The rational cohomology ring of the moduli space of abelian 3-folds. **2003h:14068**
Lange, Herbert (*with* Sernesi, Edoardo) Severi varieties and branch curves of abelian surfaces of type (1, 3). (English summary) **2003c:14049**
Lee, Min Ho[1] Rational equivariant holomorphic maps of symmetric domains. (English summary) **2003b:14052**
Sernesi, Edoardo *see* **Lange, Herbert, 2003c:14049**
Viehweg, Eckart *see* **Esnault, Hélène, 2003i:14059**
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Items with secondary classifications in 14K10

Abdulali, Salman Hodge structures on abelian varieties of type III. (English summary) **2003g:14008**
van Geemen, B. (*with* Verra, A.) Quaternionic Pryms and Hodge classes. (English summary) **2003h:14016**
van der Geer, Gerard (*with* Katsura, Toshiyuki) An invariant for varieties in positive characteristic. (English summary) **2003h:14033**
Hoffman, J. William (*with* Weintraub, Steven H.) Four dimensional symplectic geometry over the field with three elements and a moduli space of abelian surfaces. (English summary) **2003e:14045**
Jost, Jürgen (*with* Zuo, Kang[1]) Arakelov type inequalities for Hodge bundles over algebraic varieties. I. Hodge bundles over algebraic curves. (English summary) **2003b:14016**
Katsura, Toshiyuki *see* **van der Geer, Gerard, 2003h:14033**
Verra, A. *see* **van Geemen, B., 2003h:14016**
Weintraub, Steven H. *see* **Hoffman, J. William, 2003e:14045**
Zuo, Kang[1] *see* **Jost, Jürgen, 2003b:14016**

14K15 Arithmetic ground fields [see also 11Dxx, 11Fxx, 11Gxx, 14Gxx]

Bosch, Siegfried (*with* Lorenzini, Dino) Grothendieck's pairing on component groups of Jacobians. **2003b:14053**
Bouscaren, Élisabeth Théorie des modèles et conjecture de Manin-Mumford (d'après Ehud Hrushovski). [Model theory and the Manin-Mumford conjecture (following Ehud Hrushovski)] **2003f:14050**
Brumer, Armand (*with* Kramer, Kenneth) Non-existence of certain semistable abelian varieties. (English summary) **2003b:14054**
(Howe, Everett W.) *see* **Maisner, Daniel, 2003k:14057**
Kramer, Kenneth *see* **Brumer, Armand, 2003b:14054**
Lorenzini, Dino *see* **Bosch, Siegfried, 2003b:14053**
Maisner, Daniel (*with* Nart, Enric) Abelian surfaces over finite fields as Jacobians. (English summary) **2003k:14057**
Nart, Enric *see* **Maisner, Daniel, 2003k:14057**

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Conrad, Brian (*with* Stein, William A.) Component groups of purely toric quotients. (English summary) **2003f:11087**
Ellenberg, Jordan S. Finite flatness of torsion subschemes of Hilbert-Blumenthal abelian varieties. (English summary) **2003c:11062**
Gordon, B. Brent (*with* Joshi, Kirti) Griffiths groups of supersingular abelian varieties. (English summary) **2003b:14014**
Howe, Everett W. (*with* Zhu, Hui June) On the existence of absolutely simple abelian varieties of a given dimension over an arbitrary field. (English summary) **2003g:11063**
Joshi, Kirti *see* **Gordon, B. Brent, 2003b:14014**
Köhler, Kai (*with* Roessler, Damien) A fixed point formula of Lefschetz type in Arakelov geometry. II. A residue formula. (English and French summaries) **2003m:14041b**

Mochizuki, Shinichi The intrinsic Hodge theory of p-adic hyperbolic curves. **2003a:14035**
Papanikolas, Matthew A. Universal norms on abelian varieties over global function fields. (English summary) **2003f:11083**
van der Put, Marius Valuation theory in rigid geometry and curves over valuation rings. (English summary) **2003j:14024**
Roessler, Damien *see* **Köhler, Kai**. **2003m:14041b**
(de Shalit, Ehud) *see* **Chai, Ching-Li**, **2003e:11126**
Silverberg, Alice (*with* Zarkhin, Yu. G.) Polarizations on abelian varieties. **2003h:14067**
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Wintenberger, Jean-Pierre Démonstration d'une conjecture de Lang dans des cas particuliers. (English summary) [Proof of a conjecture by Lang in some particular cases] **2003i:11075**
Yu, Jiu-Kang *see* **Chai, Ching-Li**, **2003e:11126**
Zarkhin, Yu. G. Cyclic covers of the projective line, their Jacobians and endomorphisms. **2003a:11068**
— *see also* **Silverberg, Alice**, **2003h:14067**
Zhu, Hui June *see* **Howe, Everett W.**, **2003g:11063**

14K20 Analytic theory; abelian integrals and differentials

Biswas, Indranil Differential operators on a polarized abelian variety. (English summary) **2003f:14051**
Galluzzi, Federica Abelian fourfold of Mumford-type and Kuga-Satake varieties. (English summary) **2003g:14061**
Malyshev, Vadim A. The Abel equation. (Russian. Russian summary) **2003a:14064**
— Algebraic solution of the Zolotarev problem. (Russian)

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Griffiths, Phillip A. *see* **Green, Mark L.**, **2003c:14009**
Mironov, A. E. Real commuting differential operators associated with two-dimensional abelian varieties. (Russian. Russian summary) **2003b:37111**
Weber, Matthias[2] Period quotient maps of meromorphic 1-forms and minimal surfaces on tori. (English summary) **2003a:53011**

14K22 Complex multiplication [see also 11G15]

Items with secondary classifications in 14K22

Aoki, Noboru Hodge cycles on CM abelian varieties of Fermat type. **2003f:11085**
Milne, J. S. Polarizations and Grothendieck's standard conjectures. (English summary) **2003c:14010**

14K25 Theta functions [see also 14H42]

Grant, David R. On Gunning's prime form in genus 2. (English summary) **2003d:14054**
Işik, Ahmet (*with* Konyalioğlu, A. Cihan) A relation between Riemann theta functions and Jacobi theta functions. (English summary) **2003b:14055**
Konyalioğlu, A. Cihan *see* **Işik, Ahmet**, **2003b:14055**
Manin, Yurii Ivanovich Theta functions, quantum tori and Heisenberg groups. (English summary) **2003a:14065**

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Boxall, John (*with* Grant, David R.) Theta functions and singular torsion on elliptic curves. **2003k:11093**
Bump, Daniel (*with* Pekker, Alexander) On the dimension of the space of theta functions. (English summary) **2003g:11041**
Farkas, Hershel M. (*with* Kra, Irwin) On theta constant identities and the evaluation of trigonometric sums. **2003k:11067**
Florentino, Carlos A. (*with* Mourão, José M.; Nunes, João P.) Coherent state transforms and abelian varieties. (English summary) **2003j:22010**
Fukaya, Kenji Mirror symmetry of abelian varieties and multi-theta functions. (English summary) **2003m:14059**
Grant, David R. Some product formulas for theta functions in one and two variables. **2003a:11047**
— *see also* **Boxall, John**, **2003k:11093**
Koike, Kenji On the family of pentagonal curves of genus 6 and associated modular forms on the ball. (English summary) **2003j:14036**
Kra, Irwin *see* **Farkas, Hershel M.**, **2003k:11067**
Mourão, José M. *see* **Florentino, Carlos A. et al.**, **2003j:22010**
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14K30 Picard schemes, higher Jacobians [see also 14H40, 32G20]

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Esteves, Eduardo (*with* Gagné, Mathieu; Kleiman, Steven) Autoduality of the compactified Jacobian. (English summary) **2003d:14038**
Gagné, Mathieu *see* **Esteves, Eduardo et al.**, **2003d:14038**
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14K99 None of the above, but in this section

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Hulek, Klaus *see* **Ciliberto, Ciro**, **2003f:14049**
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Milne, J. S. Polarizations and Grothendieck's standard conjectures. (English summary) **2003c:14010**
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Tsutsui, Toru *see* **Koike, Kenji et al.**, **2003d:14049**

14Lxx Algebraic groups {For linear algebraic groups, see 20Gxx; for Lie algebras, see 17B45.}

14L05 Formal groups, p-divisible groups [see also 55N22]

Faltings, Gerd A relation between two moduli spaces studied by V. G. Drinfeld. (English summary) **2003g:14062**
Greenlees, J. P. C. Multiplicative equivariant formal group laws. (English summary) **2003m:14065**
Oort, Frans (*with* Zink, Thomas) Families of p-divisible groups with constant Newton polygon. (English summary) **2003m:14066**
Zink, Thomas On the slope filtration. (English summary) **2003d:14055**
— *see also* **Oort, Frans**, **2003m:14066**

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Demchenko, O. V. Formal groups over p-adic rings of integers with small ramification, and distinguished isogenies. (Russian. Russian summary) **2003i:11176**
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Sairaiji, Fumio Formal groups of certain $\mathbf{Q}$-curves over quadratic fields. **2003j:11061**
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Strickland, N. P. Common subbundles and intersections of divisors. (English summary) **2003j:55006**
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Yato, Mitsuaki On the extensions of $\widehat{\mathcal{G}}^{(\lambda)}$ by $\widehat{\mathbf{G}}_a$ over a $\mathbf{Z}_{(p)}$-algebra. (English summary) **2003d:14056**

14L10 Group varieties

Items with secondary classifications in 14L10

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14L15 Group schemes

Farnsteiner, Rolf (*with* Voigt, Detlef) Representations of infinitesimal groups of characteristic 2. (English summary) **2003a:14066**
Skryabin, S. M. Invariants of finite group schemes. (English summary) **2003b:14056**
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Voskresenskiĭ, V. E. Galois lattices and algebraic groups. **2003b:14057**
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Conrad, Brian A modern proof of Chevalley's theorem on algebraic groups. (English summary) **2003f:20078**

Kahn, Bruno *see* **André, Yves[1] et al., 2003m:18009**
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Nitsure, Nitin Representability of GL_E. (English summary) **2003j:14019**
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Pevtsova, Julia Infinite dimensional modules for Frobenius kernels. (English summary) **2003c:20052**
Restuccia, Gaetana (*with* Schneider, Hans-Jürgen[2]) On actions of infinitesimal group schemes. **2003m:16053**
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Vasserot, E. On the action of the dual group on the cohomology of perverse sheaves on the affine Grassmannian. (English summary) **2003b:20062**
Vella, David C. *see* **Nakano, Daniel K. et al., 2003b:20063**

14L17 Affine algebraic groups, hyperalgebra constructions [see also 17B45, 18D35]

Bertolin, Cristiana The Mumford-Tate group of 1-motives. (English and French summaries) **2003f:14052**
Farkas, Daniel R. (*with* Geiss, Christof; Marcos, Eduardo do Nascimento) Smooth automorphism group schemes. (English summary) **2003b:14058**
Geiss, Christof *see* **Farkas, Daniel R. et al., 2003b:14058**
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Items with secondary classifications in 14L17

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14L24 Geometric invariant theory [see also 13A50]

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Hausen, Jürgen A generalization of Mumford's geometric invariant theory. (English summary) **2003a:14067**
Rauschning, Jan (*with* Slodowy, Peter) An aspect of icosahedral symmetry. (English summary) **2003i:14060**
Sartori, G. Geometric invariant theory in a model-independent analysis of spontaneous symmetry and supersymmetry breaking. (English summary) **2003g:14063**
Schmitt, Alexander H. W. A simple proof for the finiteness of GIT-quotients. (English summary) **2003h:14069**
Slodowy, Peter *see* **Rauschning, Jan, 2003i:14060**

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A'Campo-Neuen, Annette (*with* Hausen, Jürgen; Schröer, Stefan) Homogeneous coordinates and quotient presentations for toric varieties. (English summary) **2003j:14066**
Belozerov, V. E. On one problem of group classification of linear dynamical systems. (English summary) **2003a:93019**
Białynicki-Birula, Andrzej Quotients by actions of groups. **2003f:14055**
Buium, Alexandru Quotients of algebraic varieties by Zariski dense equivalence relations. (English summary) **2003m:14068**
Derksen, Harm (*with* Weyman, Jerzy) On the Littlewood-Richardson polynomials. (English summary) **2003i:16021**
Hausen, Jürgen Equivariant embeddings into smooth toric varieties. (English summary) **2003c:14055**
— *see also* **A'Campo-Neuen, Annette et al., 2003j:14066**
Helmke, Uwe *see* **Ravi, M. S. et al., 2003g:93025**
Hu, Yi Combinatorics and quotients of toric varieties. (English summary) **2003g:52020**
Karu, Kalle *see* **Abramovich, Dan et al., 2003c:14016**
Kirwan, Frances Moduli spaces in algebraic geometry. (English summary) **2003c:14014**
Kojima, Sadayoshi Complex hyperbolic cone structures on the configuration spaces. (English summary) **2003b:55018**
Matsuki, Kenji *see* **Abramovich, Dan et al., 2003c:14016**
Perrin, Nicolas Lieu singulier des surfaces rationnelles réglées. [Singular locus of rational ruled surfaces] **2003i:14050**
Ravi, M. S. (*with* Rosenthal, Joachim; Helmke, Uwe) Output feedback invariants. (English summary) **2003g:93025**
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Rosenthal, Joachim *see* **Ravi, M. S. et al., 2003g:93025**
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Skryabin, S. M. Invariant polynomial functions on the Poisson algebra in characteristic p. **2003h:17028**
— Invariants of finite group schemes. (English summary) **2003b:14056**
Weyman, Jerzy *see* **Derksen, Harm, 2003i:16021**
Włodarczyk, Jarosław *see* **Abramovich, Dan et al., 2003c:14016**
Yang, Qi Lin Poisson morphisms and reduced affine Poisson group actions. (English summary) **2003e:17033**
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Youssin, Boris *see* **Reichstein, Zinovy, 2003c:14017**

14L30 Group actions on varieties or schemes (quotients) [see also 13A50, 14L24]

A'Campo-Neuen, Annette (*with* Hausen, Jürgen) Orbit spaces of small tori. (English summary) **2003m:14067**
Aehle, Robert (*with* Riedtmann, Christine; Zwara, G.) Complexity of degenerations of modules. (English summary) **2003f:14053**
Akhiezer, D. N. (*with* Panyushev, Dmitrii I.) Multiplicities in the branching rules and the complexity of homogeneous spaces. (English and Russian summaries) **2003d:14057**
Artamkin, D. I. (*with* Nurmiev, A. G.) Orbits and invariants of third-order cubic matrices with symmetric layers. (Russian. Russian summary) **2003k:14058**
Arzhantsev, Ivan V. On the stability of diagonal actions. (Russian. Russian summary) **2003f:14054**
Baranovskiĭ, V. Yu. The variety of pairs of commuting nilpotent matrices is irreducible. (English summary) **2003d:14058**
Białynicki-Birula, Andrzej Quotients by actions of groups. **2003f:14055**
— On the moment measure conjecture. (English summary) **2003c:14050**
Borne, Niels Structure du groupe de Grothendieck équivariant d'une courbe et modules galoisiens. (English and French summaries) [Structure of the equivariant Grothendieck group of a curve and Galois modules] **2003a:14068**
Brion, Michel Erratum to: "Rational smoothness and fixed points of torus actions" [Transform. Groups **4** (1999), no. 2-3, 127–156; MR 2000f:14072]. **2003b:14059**
Buium, Alexandru Quotients of algebraic varieties by Zariski dense equivalence relations. (English summary) **2003m:14068**
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Finkelberg, M. V. (*with* Ginzburg, Victor) Calogero-Moser space and Kostka polynomials. (English summary) **2003m:14070**
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Gyoja, Akihiko (*with* Omoda, Yasuhiro) Characteristic cycles of certain character sheaves. (English summary) **2003i:14061**
Hausen, Jürgen *see* **A'Campo-Neuen, Annette, 2003m:14067**
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Luna, D. Variétés sphériques de type A. [Spherical varieties of type A] **2003f:14056**
— Sur les plongements de Demazure. [Demazure embeddings] **2003m:14072**
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Miyanishi, M. (*with* Masuda, Kayo) Open algebraic surfaces with finite group actions. (English summary) **2003c:14051**
Ng, Kok Onn The classification of $(3, 3, 4)$ trilinear forms. (English summary) **2003m:14073**
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Omoda, Yasuhiro *see* **Gyoja, Akihiko, 2003i:14061**
Panyushev, Dmitrii I. *see* **Akhiezer, D. N., 2003d:14057**
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— (*with* Youssin, Boris) A birational invariant for algebraic group actions. (English summary) **2003c:14052**
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Arzhantsev, Ivan V. Invariant subalgebras and affine embeddings of homogeneous spaces. **2003j:14064**
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Bartolone, Claudio G. (*with* Vaccaro, M. Alessandra) The structure of symplectic groups associated with a quadratic extension of fields. (English summary) **2003k:14059**
Bayer, Thomas Computing stratifications of quotients of finite groups and an application to shape memory alloys. (English summary) **2003k:68129**
Berchtold, Florian Lifting of morphisms to quotient presentations. (English summary) **2003m:14083**
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— Geometry of decomposable directing modules over tame algebras. (English summary) **2003a:16016**
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Braverman, Maxim Cohomology of the Mumford quotient. (English summary) **2003k:32030**
Brion, Michel (*with* Joshua, Roy) Vanishing of odd-dimensional intersection cohomology. II. (English summary) **2003i:14022**
Deveney, James K. (*with* Finston, David R.) $\mathbf{G}_a$ invariants and slices. (English summary) **2003c:14073**
Donagi, Ron Y. (*with* Gaitsgory, D.) The gerbe of Higgs bundles. (English summary) **2003e:14034**

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Gille, Philippe Torseurs sur la droite affine. (English summary) [Torsors on the affine line] **2003h:20085**
Ginzburg, Victor *see* **Etingof, Pavel I., 2003b:16021**
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Halic, Mihai GW invariants and invariant quotients. (English summary) **2003c:14061**
Hausen, Jürgen A generalization of Mumford's geometric invariant theory. (English summary) **2003a:14067**
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– *see also* **A'Campo-Neuen, Annette et al., 2003a:14078** *and* **2003j:14066**
Joshua, Roy *see* **Brion, Michel, 2003i:14022**
Knop, Friedrich A connectedness property of algebraic moment maps. **2003m:53150**
Köhler, Kai (*with* Roessler, Damien) A fixed point formula of Lefschetz type in Arakelov geometry. I. Statement and proof. (English summary) **2003m:14041a**
– (*with* Roessler, Damien) A fixed point formula of Lefschetz type in Arakelov geometry. II. A residue formula. (English and French summaries) **2003m:14041b**
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Lakshmibai, Venkatramani (*with* Littelmann, Peter; Magyar, Peter) Standard monomial theory for Bott-Samelson varieties. (English summary) **2003d:14061**
Lawther, Ross (*with* Liebeck, Martin W.; Seitz, Gary M.) Fixed point spaces in actions of exceptional algebraic groups. (English summary) **2003g:20080**
Liebeck, Martin W. *see* **Lawther, Ross et al., 2003g:20080**
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López, Amparo (*with* Maisner, Daniel; Nart, Enric; Xarles, Xavier) Orbits of Galois invariant n-sets of $\mathbb{P}^1$ under the action of PGL_2. (English summary) **2003c:14025**
Lyubashenko, Volodymyr V. Coherence isomorphisms for a Hopf category. **2003a:16057**
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Reichstein, Zinovy (*with* Youssin, Boris) Equivariant resolution of points of indeterminacy. (English summary) **2003c:14017**
Reid, Miles La correspondance de McKay. [The McKay correspondence] **2003h:14026**
Roessler, Damien *see* **Köhler, Kai, 2003m:14041a** *and* **2003m:14041b**
Sabourin, Hervé (*with* Yu, Rupert W. T.) Sur l'irréductibilité de la variété commutante d'une paire symétrique réductive de rang 1. (French summary) [Irreducibility of the commuting variety of a rank-1 reductive symmetric pair] **2003c:17012**
Schmitt, Alexander H. W. A simple proof for the finiteness of GIT-quotients. (English summary) **2003h:14069**
Schofield, Aidan Birational classification of moduli spaces of representations of quivers. (English summary) **2003k:16028**
Schröer, Stefan *see* **A'Campo-Neuen, Annette et al., 2003j:14066**
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Shmelkin, D. A. On spherical representations of quivers and generalized complexes. (English summary) **2003a:16022**
Skowroński, Andrzej *see* **Bobiński, Grzegorz, 2003d:16021**
Vaccaro, M. Alessandra *see* **Bartolone, Claudio G., 2003k:14059**
Vezzosi, Gabriele (*with* Vistoli, Angelo) Higher algebraic K-theory of group actions with finite stabilizers. (English summary) **2003g:19004**
Vistoli, Angelo *see* **Vezzosi, Gabriele, 2003g:19004**
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Yakimova, O. S. Regular isometries of weakly symmetric spaces. (Russian. Russian summary) **2003c:53071**
Youssin, Boris *see* **Reichstein, Zinovy, 2003c:14017**
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14L35 Classical groups (geometric aspects) [see also 20Gxx, 51N30]

Bartolone, Claudio G. (*with* Vaccaro, M. Alessandra) The structure of symplectic groups associated with a quadratic extension of fields. (English summary) **2003k:14059**
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Vaccaro, M. Alessandra *see* **Bartolone, Claudio G., 2003k:14059**

Items with secondary classifications in 14L35

Cossidente, Antonio (*with* King, Oliver H.) Maximal subgroups of finite symplectic groups stabilizing spreads of lines. (English summary) **2003i:20087**
King, Oliver H. *see* **Cossidente, Antonio, 2003i:20087**

14L40 Other algebraic groups (geometric aspects)

Items with secondary classifications in 14L40

Terada, Itaru Brauer diagrams, updown tableaux and nilpotent matrices. (English summary) **2003f:05126**

14L99 None of the above, but in this section

Harari, David Groupes algébriques et points rationnels. (English and French summaries) [Algebraic groups and rational points] **2003e:14038**

Items with secondary classifications in 14L99

Tchoudjem, Alexis Cohomologie des fibrés en droites sur la compactification magnifique d'un groupe semi-simple adjoint. (English and French summaries) [Cohomology of line bundles on the wonderful compactification of an adjoint semisimple group] **2003b:14028**

14Mxx Special varieties

14M05 Varieties defined by ring conditions (factorial, Cohen-Macaulay, seminormal) [see also 13F45, 13H10]

Ballico, Edoardo Embeddings of unreduced curves in projective spaces: postulation and minimal free resolution. (English summary) **2003a:14071**
Buckles, Mark (*with* Guardo, Elena; Van Tuyl, Adam) Fat points on a grid in $\mathbb{P}^2$. (English summary) **2003f:14057**
– (*with* Guardo, Elena; Van Tuyl, Adam) Fat points on a generic almost complete intersection. (English summary) **2003e:14039**
Dolcetti, Alberto Subcanonical, Gorenstein and complete intersection curves on del Pezzo surfaces. (English and Italian summaries) **2003h:14070**
Guardo, Elena *see* **Buckles, Mark et al., 2003e:14039** *and* **2003f:14057**
Mancini, Marina Projectively Cohen-Macauly surfaces of small degree in $\mathbb{P}^5$. (English summary) [Projectively Cohen-Macaulay surfaces of small degree in $\mathbb{P}^5$] **2003b:14060**
Van Tuyl, Adam *see* **Buckles, Mark et al., 2003e:14039** *and* **2003f:14057**

Items with secondary classifications in 14M05

Ballico, Edoardo (*with* Chiarli, Nadia; Greco, Silvio) Linearly normal curves with degenerate general hyperplane section. (English summary) **2003e:14042**
– Multiple structures on lines. (English summary) **2003d:14006**
Chiarli, Nadia *see* **Ballico, Edoardo et al., 2003e:14042**
Eisenbud, David (*with* Popescu, Sorin; Schreyer, Frank-Olaf; Walter, Charles H.) Exterior algebra methods for the minimal resolution conjecture. (English summary) **2003e:13019**
Esteves, Eduardo The Castelnuovo-Mumford regularity of an integral variety of a vector field on projective space. (English summary) **2003a:14080**
García-Sánchez, P. A. (*with* Rosales, J. C.) On Buchsbaum simplicial affine semigroups. (English summary) **2003c:13015**
Greco, Silvio *see* **Ballico, Edoardo et al., 2003e:14042**
Iliev, Atanas (*with* Ranestad, Kristian) Canonical curves and varieties of sums of powers of cubic polynomials. (English summary) **2003c:14032**
Kleppe, Jan O. (*with* Peterson, Chris) Sheaves with canonical determinant on Cohen-Macaulay schemes. (English summary) **2003k:14017**
Patil, D. P. (*with* Tamone, G.) On the type of the associated graded ring of certain monomial curves. (English summary) **2003i:13003**
Perrin, Daniel Un pas vers la connexité du schéma de Hilbert: les courbes de Koszul sont dans la composante des extrémales. (English summary) [A step toward the connectedness of the Hilbert scheme: Koszul curves are in the component of extremals] **2003a:14005**
Peterson, Chris *see* **Kleppe, Jan O., 2003k:14017**
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14M06 Linkage [see also 13C40]

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14M07 Low codimension problems

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14M10 Complete intersections [see also 13C40]

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14M12 Determinantal varieties [see also 13C40]

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14M15 Grassmannians, Schubert varieties, flag manifolds [see also 32M10, 51M35]

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14M17 Homogeneous spaces and generalizations [see also 32M10, 53C30, 57T15]

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14M20 Rational and unirational varieties

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14M25 Toric varieties, Newton polyhedra [see also 52B20]

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14N05 Projective techniques [see also 51N35]

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14N10 Enumerative problems (combinatorial problems)

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Gathmann, Andreas Absolute and relative Gromov-Witten invariants of very ample hypersurfaces. (English summary) **2003k:14068**
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14N15 Classical problems, Schubert calculus

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Choe, Insong Dimensions of very ample pluricanonical subsystems for compact quotients of bounded symmetric domains. (English summary) **2003f:32032**
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14N20 Configurations of linear subspaces

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Kozlov, Dmitry N. A comparison of Vassiliev and Ziegler-Živaljević models for homotopy types of subspace arrangements. (English summary) **2003m:55025**
Kulikov, Vik. S. (*with* Kharlamov, Viatcheslav) On real structures on rigid surfaces. (Russian. Russian summary) **2003h:14089**
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Ng, Kok Onn The classification of $(3, 3, 4)$ trilinear forms. (English summary) **2003m:14073**
Rams, Sławomir Three-divisible families of skew lines on a smooth projective quintic. (English summary) **2003b:14064**
Randell, Richard Morse theory, Milnor fibers and minimality of hyperplane arrangements. (English summary) **2003e:32048**
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14N25 Varieties of low degree

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14N30 Adjunction problems

Maeda, Hidetoshi (*with* Sommese, Andrew J.) Very ample vector bundles of curve genus two. (English summary) **2003f:14062**
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14N35 Gromov-Witten invariants, quantum cohomology [see also 53D45]

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Bryan, Jim Multiple cover formulas for Gromov-Witten invariants and BPS states. (English summary) (*see* **2003a:00035**)
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Eguchi, Tohru (*with* Getzler, Ezra; Xiong, Chuan-Sheng) Topological gravity in genus 2 with two primary fields. (English summary) **2003f:14063**
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14Pxx Real algebraic and real analytic geometry

14P05 Real algebraic sets [see also 12Dxx]

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14P10 Semialgebraic sets and related spaces

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— (*with* Brasselet, Jean-Paul) Metric homology for isolated conical singularities. (English and French summaries) **2003d:14070**
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Fernando, José F. (*with* Gamboa, J. M.) Polynomial images of R^n. (English summary) **2003m:14095**
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Xia, Bican (*with* Yang, Lu) An algorithm for isolating the real solutions of semi-algebraic systems. (English summary) **2003i:68155**
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14P15 Real analytic and semianalytic sets [see also 32B20, 32C05]

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— Sums of squares in real analytic rings. (English summary) **2003b:14070**
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Broglia, F. (*with* Pernazza, L.) An Artin-Lang property for germs of C^∞ functions. (English summary) **2003f:32010**
Dutertre, Nicolas On the Milnor fiber of a real map-gem. (English summary) **2003d:58060**
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14P20 Nash functions and manifolds [see also 32C07, 58A07]

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14P25 Topology of real algebraic varieties

Ballico, Edoardo Real analytic elliptic surfaces. (English summary) **2003m:14097**
Bihan, F. Viro method for the construction of real complete intersections. (English summary) **2003g:14080**
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Bodin, Arnaud Non-reality and non-connectivity of complex polynomials. (English and French summaries) **2003k:14076**
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Birbrair, Lev (*with* Brasselet, Jean-Paul) Metric homology for isolated conical singularities. (English and French summaries) **2003d:14070**
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Ghiloni, Riccardo Algebraic obstructions and a complete solution of a rational retraction problem. (English summary) **2003j:14079**
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Kharlamov, Viatcheslav Variétés de Fano réelles (d'après C. Viterbo). [Real Fano manifolds (following C. Viterbo)] **2003d:53154**
— Topology, moduli and automorphisms of real algebraic surfaces. (English summary) **2003j:14077**
— *see also* **Degtyarëv, Aleksandr Igorevich, 2003f:14039**
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Khovanskiĭ, A. G. Three lectures on Newton polyhedra. (*see* **2003a:14001**)

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Eremenko, Alexandre (*with* Gabrièlov, A. M.) The Wronski map and Grassmannians of real codimension 2 subspaces. (English summary) **2003h:26022**
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14Qxx Computational aspects in algebraic geometry [see also 12Y05, 13Pxx, 68W30]

14Q05 Curves

Campillo, Antonio (*with* Farrán, J. I.) Symbolic Hamburger-Noether expressions of plane curves and applications to AG codes. (English summary) **2003j:14080**
Cioffi, Francesca A termination criterion for algorithms that compute algebraic curves via points. (English summary) **2003d:14075**
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Galligo, André (*with* Rupprecht, David) Irreducible decomposition of curves. (English summary) **2003h:14091**
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Sendra, J. Rafael (*with* Villarino, Carlos) Algebraically optimal parametrizations of quasi-polynomial algebraic curves. (English summary) **2003c:14070**
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Chistov, A. L. Monodromy and irreducibility criteria with algorithmic applications in characteristic zero. (Russian. English and Russian summaries) **2003k:14077**
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Fichou, Goulwen Group law on the neutral component of the Jacobian of a real hyperelliptic curve having many real components. (English summary) **2003m:14093**
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Greuel, Gert-Martin (*with* Lossen, Christoph; Schulze, Mathias) Three algorithms in algebraic geometry, coding theory and singularity theory. (English summary) **2003a:13038**
Hess, Florian Computing Riemann-Roch spaces in algebraic function fields and related topics. (English summary) **2003j:14032**
Lauder, Alan G. B. (*with* Wan, Daqing) Computing zeta functions of Artin-Schreier curves over finite fields. (English summary) **2003g:11140**
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14Q10 Surfaces, hypersurfaces

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14Q15 Higher-dimensional varieties

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14Q20 Effectivity

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14Rxx Affine geometry

14R05 Classification of affine varieties

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14R15 Jacobian problem

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14R20 Group actions on affine varieties [see also 13A50, 14L30]

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14R25 Affine fibrations [see also 14D06]

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14R99 None of the above, but in this section

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15–XX Linear and multilinear algebra; matrix theory

15–01 Instructional exposition (textbooks, tutorial papers, etc.)

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Uhlig, Frank A new unified, balanced, and conceptual approach to teaching linear algebra. (English summary)

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15–03 Historical (must also be assigned at least one classification number from Section 01)

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15–04 Explicit machine computation and programs (not the theory of computation or programming)

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15–06 Proceedings, conferences, collections, etc.

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(Barlow, Jesse L.) *see* **Special Issue: Accurate solution of eigenvalue problems**
(Berman, Avi) *see* **Conference: International Linear Algebra Society**
(Duffner, M. Antônia) *see* **Linear preserver problems**
(Elsner, Ludwig) *see* **Conference: International Linear Algebra Society**
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(Loewy, Raphael) *see* **Conference: International Linear Algebra Society**
(de Oliveira, Graciano Neves) *see* **Linear preserver problems**
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(Cvetković, Dragoš M.) *see* **Special Issue: Algebraic graph theory**
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(Haemers, Willem H.) *see* **Special Issue: Algebraic graph theory**
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(Latouche, Guy) *see* **Matrix-analytic methods, 2003c:60002**
(Puntanen, Simo) *see* **Special Issue: Linear algebra and statistics**
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15A03 Vector spaces, linear dependence, rank

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15A04 Linear transformations, semilinear transformations

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15A66 Clifford algebras, spinors

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15A69 Multilinear algebra, tensor products

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15A72 Vector and tensor algebra, theory of invariants [see also 13A50, 14L24]

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15A75 Exterior algebra, Grassmann algebras

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15A90 Applications of matrix theory to physics

Items with secondary classifications in 15A90

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Crâşmăreanu, Mircea A new method to obtain Pythagorean triple preserving matrices. (English summary) **2003h:15041**
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Mostafazadeh, Ali On the pseudo-Hermiticity of a class of PT-symmetric Hamiltonians in one dimension. (English summary) **2003h:81043**
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15A99 Miscellaneous topics

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Johnson, Charles Royal *see* **Eischen, Ellen E. et al., 2003i:15027**
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Fritzsche, Bernd (*with* Kirstein, Bernd; Mosch, Mirko) On block completion problems for Arov-normalized j_{qq}-J_q-elementary factors. (English summary) **2003c:47030**
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Kublanovskaya, V. N. On the solution of multiparameter problems of algebra. I. Methods for computing hereditary polynomials and their applications. (Russian. English and Russian summaries) **2003f:15022**
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Popa, Constantin Modified Kovarik algorithm for approximate orthogonalization of arbitrary matrices. (English summary)
Wu, Xin Yuan *see* **Li, Qinghong, 2003f:65118**

16–XX Associative rings and algebras {For the commutative case, see 13–XX.}

16–00 General reference works (handbooks, dictionaries, bibliographies, etc.)

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16–01 Instructional exposition (textbooks, tutorial papers, etc.)

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— ★ Basic algebra. **2003m:00001**
Polcino Milies, César (*with* Sehgal, Sudarshan K.) ★ An introduction to group rings. (English summary) **2003b:16026**
Sehgal, Sudarshan K. *see* **Polcino Milies, César, 2003b:16026**

16–02 Research exposition (monographs, survey articles)

Kelarev, Andrei V. ★ Ring constructions and applications. (English summary) **2003a:16001**

Items with secondary classifications in 16–02

Dinh Van Huynh *see* **Faith, Carl, 2003e:16025**
Faith, Carl (*with* Dinh Van Huynh) When self-injective rings are QF: a report on a problem. (English summary) **2003e:16025**
— (*with* Dinh Van Huynh) Errata to: "When self-injective rings are QF: a report on a problem" [J. Algebra Appl. **1** (2002), no. 1, 75–105; MR 2003e:16025]. .
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16–03 Historical (must also be assigned at least one classification number from Section 01)

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(Clay, James Ray) *see* **Betsch, Gerhard, 2003g:01036**

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Anniversary:
Death of Clay, James Ray *see* **Betsch, Gerhard, 2003g:01036**

16–04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 16–04

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16–06 Proceedings, conferences, collections, etc.

(Drozd, Yu. A.) *see* **Special Issue: Linear algebra methods in representation theory**
(Fong, Yuen) *see* **Near-rings and near-fields, 2003f:16001**
(Fujita, Hisaaki) *see* **Proceedings: Symposium on Ring Theory and Representation Theory, 2003c:16001**
(Happel, Dieter) *see* **Special Issue: Linear algebra methods in representation theory**
(Hirano, Yasuyuki) *see* **Proceedings: Symposium on Ring Theory and Representation Theory, 2003k:16001**
(Maxson, C. J.) *see* **Near-rings and near-fields, 2003f:16001**
(Meldrum, John) *see* **Near-rings and near-fields, 2003f:16001**
(Montgomery, Susan) *see* **New directions in Hopf algebras, 2003a:16002**
(Pilz, Günter) *see* **Near-rings and near-fields, 2003f:16001**
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(Schneider, Hans-Jürgen[2]) *see* **New directions in Hopf algebras, 2003a:16002**
(van der Walt, Andries) *see* **Near-rings and near-fields, 2003f:16001**
(van Wyk, Leon) *see* **Near-rings and near-fields, 2003f:16001**

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Symposium on Ring Theory and Representation Theory ★ Proceedings of the 34th Symposium on Ring Theory and Representation Theory. **2003c:16001**
— ★ Proceedings of the 35th Symposium on Ring Theory and Representation Theory. **2003k:16001**
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Items with secondary classifications in 16–06

(Arbarello, Enrico) *see* **Birthday: Procesi, Claudio**
(De Concini, Corrado) *see* **Birthday: Procesi, Claudio**
(Kuhlmann, Franz-Viktor) *see* **Valuation theory and its applications, 2003c:12001**
(Kuhlmann, Salma) *see* **Valuation theory and its applications, 2003c:12001**
(Littelmann, Peter) *see* **Birthday: Procesi, Claudio**
(Loefwall, Clas) *see* **Festschrift: Roos, Jan-Erik**
(Marshall, Murray A.) *see* **Valuation theory and its applications, 2003c:12001**
(Procesi, Claudio) *see* **Birthday: Procesi, Claudio**
(Roos, Jan-Erik) *see* **Festschrift: Roos, Jan-Erik**
(Salvati-Manni, Riccardo) *see* **Birthday: Procesi, Claudio**
(Vainerman, Leonid) *see* **Locally compact quantum groups and groupoids, 2003m:22001**

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Birthday:
Procesi, Claudio ★ Special issue in celebration of Claudio Procesi's 60th birthday.
Cohomology theory of finite groups and related topics ★ Yūgen gun no kohomorogī ron no kenkyū. (Japanese) [Cohomology theory of finite groups and related topics]
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Valuation Theory ★ Valuation theory and its applications. Vol. I. **2003c:12001**
Festschrift:
Roos, Jan-Erik ★ The Roos Festschrift volume. 1.
— ★ The Roos Festschrift volume. 2.
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Meeting:
Algebra ★ IX Encontro em Álgebra USP/UNICAMP/UNESP. [IX Algebra Meeting USP/UNICAMP/UNESP]
São Pedro ★ IX Encontro em Álgebra USP/UNICAMP/UNESP. [IX Algebra Meeting USP/UNICAMP/UNESP]
Saskatoon, SK ★ Valuation theory and its applications. Vol. I. **2003c:12001**
Strasbourg ★ Locally compact quantum groups and groupoids. **2003m:22001**
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Workshop:
Quantum Groups, Hopf Algebras and their Applications ★ Locally compact quantum groups and groupoids. **2003m:22001**
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16Bxx General and miscellaneous

16B70 Applications of logic [see also 03Cxx]

Marcja, Annalisa (*with* Prest, Mike; Toffalori, Carlo) The torsionfree part of the Ziegler spectrum of RG when R is a Dedekind domain and G is a finite group. **2003j:16001**
Prest, Mike *see* **Marcja, Annalisa et al., 2003j:16001**
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Items with secondary classifications in 16B70

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Dellunde, Pilar (*with* Delon, Françoise; Point, Françoise) The theory of modules of separably closed fields. I. (English summary) **2003g:03051**
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— Vaught's conjecture. **2003d:03062**
Puninskiĭ, G. E. Some model theory over an exceptional uniserial ring and decompositions of serial modules. (English summary) **2003b:16006**
— Model theory of rings and modules. (English summary) **2003a:03053**
Zayed, Maher On f-injective modules. (English summary) **2003b:16007**

16Dxx Modules, bimodules and ideals

16D10 General module theory

Albrecht, Ulrich (*with* Goeters, H. Patrick; Giovannitti, Anthony J.) Pure submodules and torsion free images of completely decomposable torsion free modules. (English summary) **2003k:16002**
Alkan, Mustafa (*with* Harmancı, Abdullah) On summand sum and summand intersection property of modules. (English summary) **2003b:16001**
Angeleri Hügel, Lidia (*with* Coelho, Flávio Ulhoa) Infinitely generated complements to partial tilting modules. (English summary) **2003i:16001**
Atani, Shahabaddin Ebrahimi On non-separated coprimary modules. (English summary)
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Enochs, Edgar E. (*with* López-Ramos, J. A.) Kaplansky classes. **2003j:16005**
Feng, Liang Gui (*with* Hao, Zhi Feng) The category of finitely generated meta-projective left R-modules. (English and Chinese summaries) **2003c:16003**
Ganesan, Lalitha (*with* Vanaja, N.) Modules for which every submodule has a unique coclosure. (English summary) **2003c:16004**
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Giovannitti, Anthony J. *see* **Albrecht, Ulrich et al., 2003k:16002**
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Shindoh, Yasutaka Unrelated pairs of modules. (*see* **2003c:16001**)
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Tansee, H. (*with* Wongwai, S.) A note on semi-projective modules. (English summary) **2003k:16004**
Tercan, Adnan Modules whose exact submodules are direct summands. (English summary) **2003k:16005**
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— Rings whose nonzero modules have maximal submodules. **2003f:16039**
Zil'berbord, I. M. *see* **Generalov, A. I., 2003g:16064**

16D20 Bimodules

Enochs, Edgar E. (*with* López-Ramos, J. A.; Torrecillas Jover, Blas) On Matlis dualizing modules. (English summary) **2003i:16004**
Ferrero, Miguel A. Closed submodules of normalizing bimodules over semiprime rings. (English summary) **2003a:16003**
Li, Ai Hua[1] (*with* Zhang, Qing-liang) Quasi-dual bimodules and dual-bimodules. (English and Chinese summaries)
López-Ramos, J. A. *see* **Enochs, Edgar E. et al., 2003i:16004**
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Zhang, Qing-liang *see* **Li, Ai Hua[1]**

Items with secondary classifications in 16D20

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Ding, Nanqing (*with* Yousif, Mohamed F.; Zhou, Yiqiang) Modules with annihilator conditions. (English summary) **2003c:16002**
Fong, Yuen *see* **Beidar, K. I. et al., 2003d:16004**
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Yousif, Mohamed F. *see* **Ding, Nanqing et al., 2003c:16002**
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16D25 Ideals

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Gräter, Joachim *see* **Brungs, Hans-Heinrich, 2003k:16006**
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Tushnits'kiĭ, Ī. Ya. Rings with locally defined ideals. (Ukrainian. English and Russian summaries) **2003h:16035**

16D30 Infinite-dimensional simple rings (except as in 16Kxx)

Zhao, Kaiming Simple algebras of Weyl type. II. (English summary) **2003a:16004**

Items with secondary classifications in 16D30

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Kim, Chol On *see* **Huh, Chan et al., 2003h:16001**
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16D40 Free, projective, and flat modules and ideals [see also 19A13]

Chen, Pengwei *see* **Wu, Tong Suo, 2003h:16003**
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16D50 Injective modules, self-injective rings [see also 16L60]

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Asashiba, Hideto Derived and stable equivalence classification of twisted multifold extensions of piecewise hereditary algebras of three type. **2003b:16011**
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Haghany, Ahmad Injectivity conditions over a formal triangular matrix ring. (English summary) **2003b:16032**
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Whelan, E. A. Surjectivity of the ideal extension map $\mathbb{I}(R) \to \mathbb{I}(R[X, X^{-1}; \sigma])$. (English summary) **2003c:16038**
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16D70 Structure and classification (except as in 16Gxx), direct sum decomposition, cancellation

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Hong, Chan Yong (*with* Kim, Nam Kyun; Kwak, Tai Keun) On the maximality of prime ideals in exchange rings. (English summary) **2003f:16017**
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Zhou, De Xu On non-M-singular modules with (C_{11}^{+}). (English summary) **2003i:16003**

16D80 Other classes of modules and ideals [see also 16G50]

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Behboodi, M. (*with* Koohy, H.) On minimal prime submodules. (English summary) **2003g:16004**
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16D90 Module categories [see also 16Gxx, 16S90]; module theory in a category-theoretic context; Morita equivalence and duality

Albrecht, Ulrich Modules with Morita-equivalent endomorphism rings. (English summary) **2003m:16005**
Chen, Huan Yin Stable ranges for Morita contexts. (English summary) **2003k:16012**
— Morita contexts with many units. (English summary) **2003d:16006**
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Zhou, Yan[1] (*with* Xin, Lin) Morita context functors and torsion theories. (Chinese. English and Chinese summaries)
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Borceux, Francis *see* **Moens, M.-A. et al., 2003i:18015**
Buan, Aslak Bakke (*with* Krause, Henning; Solberg, Øyvind) On the lattice of cotilting modules. **2003f:16011**
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16D99 None of the above, but in this section

Li, Rong Jun *see* **Zhao, Li Jun et al.**
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— (*with* Makamba, B. B.) Fuzzy order ideals and torsion submodules. (English summary) **2003h:16010**
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16Exx Homological methods {For commutative rings, see 13Dxx; for general categories, see 18Gxx.}

16E05 Syzygies, resolutions, complexes

Avramov, Luchezar L. (*with* Martsinkovsky, Alex) Absolute, relative, and Tate cohomology of modules of finite Gorenstein dimension. **2003g:16009**

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16E10 Homological dimension

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16E20 Grothendieck groups, K-theory, etc. [see also 18F30, 19Axx, 19D50]

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16E45 Differential graded algebras and applications

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16E50 von Neumann regular rings and generalizations

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– (*with* Li, Fu An) Exchange rings satisfying the related comparability. (English summary) **2003d:16009**
– Morita contexts with generalized stable conditions. (English summary) **2003d:16010**
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– On partially unit-regularity. (English summary)
– Strongly Π-regular Morita contexts. (English summary) **2003m:16011**
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– (*with* Kim, Nam Kyun; Lee, Yang) Exchange rings and their extensions. (English summary) **2003j:16016**
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Gopalakrishnan, Hema π-regularity of semigroup graded rings. (English summary) **2003a:16060**
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16E60 Semihereditary and hereditary rings, free ideal rings, Sylvester rings, etc.

Baba, Yoshitomo (*with* Miki, Hiroyuki) Symmetry of almost hereditary rings. **2003c:16013**
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16E65 Homological conditions on rings (generalizations of regular, Gorenstein, Cohen-Macaulay rings, etc.)

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16E99 None of the above, but in this section

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16Gxx Representation theory of rings and algebras

16G10 Representations of Artinian rings

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— Directing modules and double tilted algebras. (English summary) **2003f:16022**
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Lenzing, Helmut Twenty-one characterizations of genus zero. (English summary) **2003h:14029**
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Liu, Shi Ping[1] *see* **Buchweitz, Ragnar-Olaf, 2003c:16018**
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16G20 Representations of quivers and partially ordered sets

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— (*with* Weyman, Jerzy) Semi-invariants for quivers with relations. **2003m:16018**
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Simson, Daniel An endomorphism algebra realization problem and Kronecker embeddings for algebras of infinite representation type. (English summary) **2003g:16039**
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Xiao, Jie[1] (*with* Yang, Shilin) Coxeter transformations in quantum groups. (English summary) **2003c:17029**
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Yekutieli, Amnon *see* **Miyachi, Jun-ichi, 2003c:18013**
Zubkov, A. N. *see* **Domokos, M., 2003m:14069**

16G30 Representations of orders, lattices, algebras over commutative rings [see also 16H05]

Chernousova, Zhanna T. *see* **Zhuravl'ov, Viktor M., 2003h:16019**
Fujita, Hisaaki Neat idempotents and tiled orders having large global dimension. (*see* **2003k:16001**)
Huang, Zhao Yong Approximation extensions over Gorenstein algebras. (Chinese. English and Chinese summaries) **2003f:16025**
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Zhuravl'ov, Viktor M. (*with* Chernousova, Zhanna T.) Cyclic Gorenstein orders with few vertices. (Ukrainian. English and Ukrainian summaries) **2003h:16019**
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Osiyuk, E. A. *see* **Generalov, A. I., 2003k:16015**
Reichenbach, Ulrike Representations of Burnside rings. (English summary) **2003f:19001**
Rump, Wolfgang Lattice-finite rings and their Auslander orders. (*see* **2003c:16001**)
— Regular over-orders of lattice-finite rings and the Krull-Schmidt property. (English summary) **2003k:16030**
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Xu, Yun Ge (*with* Zhang, Yingbo) Indecomposability and the number of links. (English summary) **2003a:15011**
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16G50 Cohen-Macaulay modules

Araya, Tokuji A characterization of one dimensional N-graded Gorenstein rings of finite Cohen-Macaulay representation type. **2003f:16026**
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Matusevich, Laura Felicia Rank jumps in codimension 2 A-hypergeometric systems. (English summary) **2003f:33017**
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16G60 Representation type (finite, tame, wild, etc.)

Bautista Ramos, Raymundo (*with* Raggi-Cárdenas, A. Gerardo; Salmerón, L.) On varieties of representations of bocses. (English summary) **2003h:16021**
Bobiński, Grzegorz (*with* Skowroński, Andrzej) Geometry of periodic modules over tame concealed and tubular algebras. (English summary) **2003d:16021**
Buchweitz, Ragnar-Olaf (*with* Liu, Shi Ping[1]) Artin algebras with loops but no outer derivations. (English summary) **2003c:16018**
Chalom, Gladys (*with* Merklen, Héctor A.) Representation type of one point extensions of tilted Euclidean algebras. (English summary) **2003e:16018**
Dräxler, Peter Cleaving functors and controlled wild algebras. (English summary) **2003a:16023**
Geiss, Christof (*with* Krause, Henning) On the notion of derived tameness. (English summary) **2003c:16019**
— Derived tame algebras and Euler-forms. **2003e:16019**
Han, Yang[1] Wild radical square zero algebras. (English summary) **2003b:16015**
Kasjan, Stanisław Representation-directed algebras form an open scheme. (English summary) **2003h:16022**
(Keller, Bernhard) *see* **Geiss, Christof, 2003e:16019**
Kerner, Otto (*with* Skowroński, Andrzej) On the structure of modules over wild hereditary algebras. (English summary) **2003h:16023**
Krause, Henning *see* **Geiss, Christof, 2003c:16019**
Liu, Shi Ping[1] *see* **Buchweitz, Ragnar-Olaf, 2003c:16018**
Merklen, Héctor A. *see* **Chalom, Gladys, 2003e:16018**
Nagase, Hiroshi[2] Non-strictly wild algebras. **2003i:16024**
Novoa, C. (*with* de la Peña, José Antonio) On the tameness of trivial extensions of monomial algebras. (English and French summaries) **2003e:16020**
de la Peña, José Antonio *see* **Novoa, C., 2003e:16020**
Raggi-Cárdenas, A. Gerardo *see* **Bautista Ramos, Raymundo et al., 2003h:16021**
Salmerón, L. *see* **Bautista Ramos, Raymundo et al., 2003h:16021**
Skowroński, Andrzej Generically directed algebras. (English summary) **2003j:16022**
— *see also* **Bobiński, Grzegorz, 2003d:16021** *and* **Kerner, Otto, 2003h:16023**

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Guo, Jin Yun Translation algebras and their applications. **2003m:16015**
Malicki, Piotr (*with* Skowroński, Andrzej; Tomé, Bertha) Indecomposable modules in coils. (English summary) **2003m:16016**
Marcja, Annalisa (*with* Toffalori, Carlo) Decidability for $\mathbb{Z}_2$ G-lattices when G extends the noncyclic group of order 4. (English summary) **2003a:03022**
Miyachi, Jun-ichi (*with* Yekutieli, Amnon) Derived Picard groups of finite-dimensional hereditary algebras. (English summary) **2003c:18013**
Nazarova, L. A. (*with* Roĭter, A. V.) The norm of a relation, the function ρ, and representations of marked quivers. (Russian. Russian summary) **2003f:16024**
— (*with* Roĭter, A. V.) The norm of a relation, separation functions, and representations of marked quivers. (Russian. English and Ukrainian summaries) **2003k:16027**
Okoh, Frank Direct sum decomposition of the product of preinjective modules over right pure semisimple hereditary rings. (English summary) **2003d:16015**
de la Peña, José Antonio (*with* Tomé, Bertha) Coil algebras which are derived-tame. (English summary) **2003f:16021**
Phạm Ngọc Ánh Hall polynomials for $\widetilde{A}_n$. (English summary) **2003d:16020**
Reichenbach, Ulrike Representations of Burnside rings. (English summary) **2003f:19001**
Roĭter, A. V. *see* **Nazarova, L. A., 2003f:16024** *and* **2003k:16027**
Rump, Wolfgang Regular over-orders of lattice-finite rings and the Krull-Schmidt property. (English summary) **2003k:16030**
Schmidmeier, Markus A family of Noetherian rings with their finite length modules under control. (English summary) **2003j:16021**
Simson, Daniel An endomorphism algebra realization problem and Kronecker embeddings for algebras of infinite representation type. (English summary) **2003g:16039**
Skowroński, Andrzej *see* **Malicki, Piotr et al., 2003m:16016**
Toffalori, Carlo *see* **Marcja, Annalisa, 2003a:03022**
Tomé, Bertha *see* **de la Peña, José Antonio, 2003f:16021** *and* **Malicki, Piotr et al., 2003m:16016**
Villani, Maria Luisa A new characterisation of hereditary PI rings. (English summary) **2003m:16013**
Yao, Hailou Coherent components of Auslander-Reiten quivers whose DTr-orbits are finite. (English summary) **2003e:16022**
Yekutieli, Amnon *see* **Miyachi, Jun-ichi, 2003c:18013**

16G70 Auslander-Reiten sequences (almost split sequences) and Auslander-Reiten quivers

Bleher, Frauke M. (*with* Chinburg, Ted) Locations of modules for Brauer tree algebras. (English summary) **2003d:16022**
Chinburg, Ted *see* **Bleher, Frauke M., 2003d:16022**

Coelho, Flávio Ulhoa (*with* Lanzilotta, Marcelo Américo) On non-semiregular components containing paths from injective to projective modules. (English summary) **2003i:16025**
Dräxler, Peter (*with* Kögerler, Klara) An algorithm for finding all preprojective components of the Auslander-Reiten quiver. (English summary) **2003a:16024**
Farnsteiner, Rolf (*with* Röhrle, Gerhard) Almost split sequences of Verma modules. **2003e:16021**
Kerner, Otto (*with* Yamagata, Kunio) Auslander-Reiten components containing cones. (English summary) **2003h:16024**
Kögerler, Klara *see* **Dräxler, Peter, 2003a:16024**
Lanzilotta, Marcelo Américo *see* **Coelho, Flávio Ulhoa, 2003i:16025**
Röhrle, Gerhard *see* **Farnsteiner, Rolf, 2003e:16021**
Rump, Wolfgang Regular over-orders of lattice-finite rings and the Krull-Schmidt property. (English summary) **2003k:16030**
Skowroński, Andrzej On Artin algebras with almost all indecomposable modules of projective or injective dimension at most one. (English summary) **2003m:16019**
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Yao, Hailou Coherent components of Auslander-Reiten quivers whose DTr-orbits are finite. (English summary) **2003e:16022**

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Araya, Tokuji A characterization of one dimensional N-graded Gorenstein rings of finite Cohen-Macaulay representation type. **2003f:16026**
Chin, William (*with* Kleiner, Mark; Quinn, Declan) Almost split sequences for comodules. (English summary) **2003e:16045**
Coelho, Flávio Ulhoa (*with* Vargas, Rosana R. S.) Mesh algebras. (English summary) **2003g:16014**
Domokos, M. (*with* Lenzing, Helmut) Moduli spaces for representations of concealed-canonical algebras. (English summary) **2003d:16016**
Huang, Zhao Yong Relative homology and the structure of relative approximations. (English summary) **2003i:16018**
Kasjan, Stanisław Representation-directed algebras form an open scheme. (English summary) **2003h:16022**
Kawata, Shigeto Auslander-Reiten components and projective modules for finite p-groups. (Japanese. English summary) (*see* **2003c:16001**)
— On modules with trivial sources over group rings and Auslander-Reiten sequences. (Japanese)
Khammash, Ahmed A. I-sequences in the category of modules. (English summary) **2003d:16012**
Kleiner, Mark *see* **Chin, William et al., 2003e:16045**
Laudal, O. A. Noncommutative deformations of modules. (English summary) **2003e:16005**
Lenzing, Helmut *see* **Domokos, M., 2003d:16016**
Malicki, Piotr (*with* Skowroński, Andrzej; Tomé, Bertha) Indecomposable modules in coils. (English summary) **2003m:16016**
Marcus, Andrei ★ Representation theory of group graded algebras. **2003c:16056**
Noriega, Teresita Some remarks about the "double extension" algebra of a finite poset. (English summary) **2003d:16019**
Okuyama, Tetsuro (*with* Uno, Katsuhiro) On the vertices of modules in the Auslander-Reiten quiver. III. **2003d:20018**
Quinn, Declan *see* **Chin, William et al., 2003e:16045**
Schmidmeier, Markus A family of Noetherian rings with their finite length modules under control. (English summary) **2003j:16021**
Skowroński, Andrzej *see* **Malicki, Piotr et al., 2003m:16016**
Smalø, Sverre O. Almost split sequences in categories of representations of quivers. II. (English summary) **2003g:16015**
Tomé, Bertha *see* **Malicki, Piotr et al., 2003m:16016**
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Vargas, Rosana R. S. *see* **Coelho, Flávio Ulhoa, 2003g:16014**

16G99 None of the above, but in this section

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Hu, Jun[3] A counter-example of Dipper-Du's conjecture. (English summary) **2003e:20006**
Kriloff, Cathy (*with* Ram, Arun) Representations of graded Hecke algebras. (English summary) **2003h:20013**
Kruglyak, Stanislav (*with* Kyrychenko, Anatolii) On four orthogonal projections that satisfy the linear relation $\alpha_1 P_1 + \alpha_2 P_2 + \alpha_3 P_3 + \alpha_4 P_4 = I$, $\alpha_i > 0$. (English summary) **2003e:47123**
Kyrychenko, Anatolii *see* **Kruglyak, Stanislav, 2003e:47123**
Ram, Arun *see* **Kriloff, Cathy, 2003h:20013**
Simson, Daniel Coalgebras, comodules, pseudocompact algebras and tame comodule type. (English summary) **2003c:16051**
Terwilliger, Paul Two relations that generalize the q-Serre relations and the Dolan-Grady relations. (English summary) **2003a:16044**

16H05 Orders and arithmetic, separable algebras, Azumaya algebras [see also 11R52, 11R54, 11S45]

Haefner, Jeremy (*with* Pappacena, Christopher J.) Automorphisms of tiled orders. (English summary) **2003b:16016**
Haile, Darrell E. (*with* Rowen, Louis) Weakly Azumaya algebras. (English summary) **2003a:16025**
Iyama, Osamu A proof of Solomon's second conjecture on local zeta functions of orders. (*see* **2003c:16001**)
Pappacena, Christopher J. *see* **Haefner, Jeremy, 2003b:16016**
Passi, Inder Bir S. (*with* Roggenkamp, Klaus W.; Soriano, Marcos) Integral Jordan decomposition of matrices. (English summary) **2003g:16018**
Roggenkamp, Klaus W. *see* **Passi, Inder Bir S. et al., 2003g:16018**
Rowen, Louis *see* **Haile, Darrell E., 2003a:16025**
Rump, Wolfgang Lattice-finite rings and their Auslander orders. (*see* **2003c:16001**)
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Items with secondary classifications in 16H05

Al-Khamees, Yousif (*with* Singh, Surjeet) Inertial subrings of a locally finite algebra. (English summary) **2003c:16022**
Borceux, Francis (*with* Vitale, Enrico M.) Azumaya categories. (English summary) **2003h:18007**
Chan, Daniel Sai-Ping (*with* Kulkarni, Rajesh S.) del Pezzo orders on projective surfaces. (English summary) **2003j:14002**
Cuadra Díaz, Juan The Brauer group of irreducible coalgebras. (Spanish) **2003g:16046**
— (*with* Van Oystaeyen, Freddy) The strong Brauer group of a cocommutative coalgebra. (English summary) **2003b:16041**
Hatzaras, Y. (*with* Theohari-Apostolidi, Th.) Involutions on classical crossed products over global fields. (English summary) **2003f:16029**
Kadison, Lars Note on Miyashita-Ulbrich action and H-separable extension. (English summary) **2003a:16052**
— (*with* Nikshych, D. A.) Outer actions of centralizer Hopf algebras on separable extensions. (English summary) **2003a:16053**
Kulkarni, Rajesh S. *see* **Chan, Daniel Sai-Ping, 2003j:14002**
Mahdou, Najib On the Clifford algebra of a diagonal binary and cubic form. (English and Arabic summaries) **2003a:11039**
Nikshych, D. A. *see* **Kadison, Lars, 2003a:16053**
Nishida, Kenji Dualizing modules for orders and Artin algebras. (English summary) **2003b:16014**
Saltman, David J. (*with* Tignol, Jean-Pierre) Generic algebras with involution of degree $8m$. (English summary) **2003m:16020**
Singh, Surjeet *see* **Al-Khamees, Yousif, 2003c:16022**
Szeto, George (*with* Xue, Lianyong) On splitting rings for Azumaya skew polynomial rings. (English summary) **2003a:16039**
— (*with* Xue, Lianyong) The Galois algebras and the Azumaya Galois extensions. (English summary) **2003e:16040**
Theohari-Apostolidi, Th. *see* **Hatzaras, Y., 2003f:16029**
Tignol, Jean-Pierre *see* **Saltman, David J., 2003m:16020**
Van Oystaeyen, Freddy (*with* Zhang, Yinhuo) The Brauer group of a Hopf algebra. (English summary) **2003f:16065**
— *see also* **Cuadra Díaz, Juan, 2003b:16041**
Vitale, Enrico M. *see* **Borceux, Francis, 2003h:18007**
Wadsworth, A. R. Valuation theory on finite dimensional division algebras. **2003g:16023**
Xue, Lianyong The invariant subrings of Demeyer-Kanzaki Galois extensions. (English summary) **2003a:16037**
— *see also* **Szeto, George, 2003a:16039** *and* **2003e:16040**
Zhang, Yinhuo *see* **Van Oystaeyen, Freddy, 2003f:16065**

16Kxx Division rings and semisimple Artin rings [see also 12E15, 15A30]

16K20 Finite-dimensional {For crossed products, see 16S35.}

Akbari-Feyzaabaadi, S. (*with* Mahdavi-Hezavehi, M.) On the existence of normal maximal subgroups in division rings. (English summary) **2003c:16020**
Aravire, Roberto (*with* Jacob, William B.) Special forms of two symbols are division algebras. (English summary) **2003i:16026**
Beelen, Peter (*with* Gramlich, Ralf) On anti-automorphisms of the first kind in division rings. (English summary)
Beneish, Esther The center of the generic division ring and twisted multiplicative group actions. (English summary) **2003i:16027**
Brussel, E. S. Non-crossed products over function fields. (English summary) **2003f:16027**
Cai, Yong-yu On the first-degree algebraic equation of the generalized quaternion. (English and Chinese summaries)
Chuard-Koulmann, Pascale (*with* Morales, Jorge F.) Extending involutions on Frobenius algebras. (English summary) **2003i:16028**
Colliot-Thélène, Jean-Louis Exposant et indice d'algèbres simples centrales non ramifiées. [Exponents and indices of nonramified central simple algebras] **2003j:16023**
Dieterich, Ernst (*with* Öhman, Johan) On the classification of 4-dimensional quadratic division algebras over square-ordered fields. (English summary) **2003f:16028**
(Gabber, Ofer) *see* **Colliot-Thélène, Jean-Louis, 2003j:16023**
Grabitz, Martin (*with* Silberger, Allan J.; Zink, Ernst-Wilhelm) Level zero types and Hecke algebras for local central simple algebras. (English summary) **2003g:16019**
Gramlich, Ralf *see* **Beelen, Peter**
Gräter, Joachim Dubrovin valuation rings and orders in central simple algebras. (English summary) **2003h:16025**
Haile, Darrell E. (*with* Morandi, Patrick J.) Hyperbolicity of algebras with involution and connections with Clifford algebras. (English summary) **2003a:16026**
Hatzaras, Y. (*with* Theohari-Apostolidi, Th.) Involutions on classical crossed products over global fields. (English summary) **2003f:16029**
Huang, Li Ping[3] (*with* Wan, Zhexian) Geometry of 2×2 Hermitian matrices. (English summary) **2003j:16024**
Jacob, William B. *see* **Aravire, Roberto, 2003i:16026**
Kauta, John S. (*with* Marubayashi, Hidetoshi; Miyamoto, Haruo) Tamely ramified Dubrovin crossed products. (English summary) (*see* **2003c:16001**)
Kleinert, E. (*with* del Río, Angel) On the indecomposability of unit groups. **2003f:16030**

Laghribi, Ahmed Hyperbolicité de certaines involutions sur le corps des fonctions d'une quadrique. (English summary) [Hyperbolicity of certain involutions over the function field of a quadric] **2003h:16026**
Lewis, David W. (*with* Scheiderer, Claus; Unger, Thomas P.) A weak Hasse principle for central simple algebras with an involution. (English summary) **2003c:16021**
Mahdavi-Hezavehi, M. *see* **Akbari-Feyzaabaadi, S., 2003c:16020**
Marubayashi, Hidetoshi *see* **Kauta, John S. et al., (2003c:16001)**
Miyamoto, Haruo *see* **Kauta, John S. et al., (2003c:16001)**
Mojdeh, D. Some properties of multiplicative commutator subgroups of divisions algebras. (English summary) **2003g:16020**
Morales, Jorge F. *see* **Chuard-Koulmann, Pascale, 2003i:16028**
Morandi, Patrick J. *see* **Haile, Darrell E., 2003a:16026**
Öhman, Johan *see* **Dieterich, Ernst, 2003f:16028**
Quéguiner-Mathieu, Anne (*with* Tignol, Jean-Pierre) Discriminant and Clifford algebras. (English summary) **2003e:16023**
Rapinchuk, Andrei S. (*with* Segev, Yoav; Seitz, Gary M.) Finite quotients of the multiplicative group of a finite dimensional division algebra are solvable. **2003k:16031**
del Río, Angel *see* **Kleinert, E., 2003f:16030**
Sage, Daniel S. Group actions on central simple algebras. (English summary) **2003f:16031**
Saltman, David J. (*with* Tignol, Jean-Pierre) Generic algebras with involution of degree $8m$. (English summary) **2003m:16020**
Scheiderer, Claus *see* **Lewis, David W. et al., 2003c:16021**
Segev, Yoav *see* **Rapinchuk, Andrei S. et al., 2003k:16031**
Seitz, Gary M. *see* **Rapinchuk, Andrei S. et al., 2003k:16031**
Serhir, A. Niveau hermitien d'une algèbre de quaternions à division munie d'une involution de deuxième espèce. (English summary) [Hermitian level of a quaternion division algebra with involution of the second kind] **2003i:16029**
Silberger, Allan J. *see* **Grabitz, Martin et al., 2003g:16019**
Theohari-Apostolidi, Th. *see* **Hatzaras, Y., 2003f:16029**
Tignol, Jean-Pierre *see* **Quéguiner-Mathieu, Anne, 2003e:16023** *and* **Saltman, David J., 2003m:16020**
Todorov, Kalcho Zhelezchev On the minimal polynomials of the N-generalized quaternions. (English summary) (*see* **2003d:00012**)
Unger, Thomas P. A note on surrogate forms of central simple algebras. (English summary) **2003g:16021**
— *see also* **Lewis, David W. et al., 2003c:16021**
Vishne, Uzi Generators of central simple p-algebras of degree 3. (English summary) **2003g:16022**
Wadsworth, A. R. Valuation theory on finite dimensional division algebras. **2003g:16023**
Wan, Zhexian *see* **Huang, Li Ping[3], 2003j:16024**
Yamasaki, Aiichi Toward a generalization of strong approximation theorem to a general PF field. (English summary) **2003m:16021**
Zink, Ernst-Wilhelm *see* **Grabitz, Martin et al., 2003g:16019**

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Craven, Thomas C. Valuations and Hermitian forms on skew fields. (English summary) **2003k:12003**
Grundman, Helen G. (*with* Smith, Tara L.) Q-adequate bicyclic bicubic fields. (English summary) **2003g:11129**
Hao, Xiumei The quaternion rings on the ordered fields. (*see* **2003f:06001**)
Huang, Li Ping[3] (*with* So, Wasin) Quadratic formulas for quaternions. (English summary) **2003d:12003**
Li, Shang Zhi *see* **Wang, Qing-Wen et al., 2003d:15016a**
Lichtman, A. I. Valuation methods in group rings and in skew fields. I. (English summary) **2003m:16037**
Reichstein, Zinovy (*with* Youssin, Boris) Splitting fields of G-varieties. (English summary) **2003a:14070**
— (*with* Youssin, Boris) Conditions satisfied by characteristic polynomials in fields and division algebras. (English summary) **2003g:12001**
Segev, Yoav The commuting graph of minimal nonsolvable groups. (English summary) **2003b:20036**
Smith, Tara L. *see* **Grundman, Helen G., 2003g:11129**
So, Wasin *see* **Huang, Li Ping[3], 2003d:12003**
Sun, Jian Hua[2] *see* **Wang, Qing-Wen et al., 2003d:15016a**
Turull, Alexandre Calculating Clifford classes for characters containing a linear character once. (English summary) **2003i:20013**
Wang, Qing-Wen (*with* Sun, Jian Hua[2]; Li, Shang Zhi) Consistency for bi(skew)symmetric solutions to systems of generalized Sylvester equations over a finite central algebra. (English summary) **2003d:15016a**
Yamazaki, Takao Tate duality and ramification of division algebras. (English summary) **2003i:11175**
Youssin, Boris *see* **Reichstein, Zinovy, 2003a:14070** *and* **2003g:12001**

16K40 Infinite-dimensional and general

Arian-Nejad, M. Notes on Whitehead space of an algebra. (English summary) **2003g:16024**
Artamonov, Vyacheslav A. Valuations on quantum division rings. (English summary) **2003e:16024**
Bergman, George M. Constructing division rings as module-theoretic direct limits. (English summary) **2003b:16017**
Kolesnikov, P. S. On various definitions of algebraically closed skew fields. (Russian. Russian summary) **2003a:16027**
Leung, Chi-Kwan (*with* Shum, K. P.) New characterization theorems of semisimple Artinian rings. (English summary) **2003f:16032**
Mahdavi-Hezavehi, M. Special subgroups of skew linear groups. (English summary) **2003i:16030**
Salwa, Arkadiusz Simple Artinian rings as sums of nilpotent subrings. (English summary) **2003d:16023**
Shum, K. P. *see* **Leung, Chi-Kwan, 2003f:16032**
Treur, Jan On centralizer-related intermediate fields of a skew field extension. (English summary) **2003f:16033**

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Akbari-Feyzaabaadi, S. (*with* Mahdavi-Hezavehi, M.) On the existence of normal maximal subgroups in division rings. (English summary) **2003c:16020**
Knus, Max-Albert (*with* Parimala, R.; Sridharan, Ramaiengar) On generic triality. **2003j:16041**
Mahdavi-Hezavehi, M. *see* **Akbari-Feyzaabaadi, S., 2003c:16020**
Parimala, R. *see* **Knus, Max-Albert et al., 2003j:16041**
Sridharan, Ramaiengar *see* **Knus, Max-Albert et al., 2003j:16041**

16K50 Brauer groups [see also 12G05, 14F22]

Aljadeff, Eli (*with* Sonn, Jack) Fields for which the projective Schur subgroup is the whole Brauer group. (English summary) **2003m:16022**
Berhuy, Grégory (*with* Leep, David B.) Divisible subgroups of Brauer groups and trace forms of central simple algebras. (English summary) **2003i:16031**
Leep, David B. *see* **Berhuy, Grégory, 2003i:16031**
Sonn, Jack *see* **Aljadeff, Eli, 2003m:16022**
Van Oystaeyen, Freddy (*with* Zhang, Yinhuo) Computing subgroups of the Brauer group of H_4. (English summary) **2003h:16027**
Zhang, Yinhuo *see* **Van Oystaeyen, Freddy, 2003h:16027**

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Aravire, Roberto (*with* Jacob, William B.) Special forms of two symbols are division algebras. (English summary) **2003i:16026**
Borceux, Francis (*with* Vitale, Enrico M.) Azumaya categories. (English summary) **2003h:18007**
Fernández Vilaboa, José M. (*with* González Rodríguez, Ramón; Villanueva Nóvoa, Emilio) The Brauer group of central separable monoids in a braided monoidal category. (English summary) **2003h:18008**
González Rodríguez, Ramón *see* **Fernández Vilaboa, José M. et al., 2003h:18008**
Jacob, William B. *see* **Aravire, Roberto, 2003i:16026**
Vela, Montserrat Central simple $\mathbb{Z}/n\mathbb{Z}$-graded algebras. (English summary) **2003b:16048**
Villanueva Nóvoa, Emilio *see* **Fernández Vilaboa, José M. et al., 2003h:18008**
Vitale, Enrico M. *see* **Borceux, Francis, 2003h:18007**

16K99 None of the above, but in this section

Khimshiashvili, G. N. Counting roots of quaternionic polynomials. (English and Georgian summaries) **2003m:16023**

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Beidar, K. I. (*with* Fong, Yuen; Ke, W.-F.; Jain, Surender Kumar) An example of a right q-ring. (English summary) **2003d:16004**
Fong, Yuen *see* **Beidar, K. I. et al., 2003d:16004**
Jain, Surender Kumar *see* **Beidar, K. I. et al., 2003d:16004**
Ke, W.-F. *see* **Beidar, K. I. et al., 2003d:16004**

16Lxx Local rings and generalizations

16L30 Noncommutative local and semilocal rings, perfect rings

Al-Khamees, Yousif (*with* Singh, Surjeet) Inertial subrings of a locally finite algebra. (English summary) **2003c:16022**
Artemovich, O. D. Differentially trivial Noetherian semiperfect rings. (English summary) **2003m:16024**
Chin, Angelina Y. M. A nonhomological proof of semiperfectness in matrix rings.
Dokuchaev, M. A. (*with* Kirichenko, Volodimir V.) On semiperfect rings with duality for simple modules. (Ukrainian summary)
Fahmy, Mohamed Hussein (*with* Fahmy, Susan) On non-commutative Noetherian local rings, non-commutative geometry and particle physics. (English summary)
Fahmy, Susan *see* **Fahmy, Mohamed Hussein**
Khurana, Dinesh Semiperfect rings and Nakayama permutations. (English summary) **2003c:16023**
Kirichenko, Volodimir V. *see* **Dokuchaev, M. A.**
Singh, Surjeet *see* **Al-Khamees, Yousif, 2003c:16022**
Zhou, Yiqiang Erratum: "A characterization of left perfect rings" [Canad. Math. Bull. **38** (1995), no. 3, 382–384; MR 96f:16023]. (English summary) **2003m:16025**

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Brungs, Hans-Heinrich (*with* Gräter, Joachim) Characterizing nearly simple chain domains. (English summary) **2003k:16006**
Chin, Angelina Y. M. A note on semilocal group rings. (English summary) **2003m:16035**
Gräter, Joachim *see* **Brungs, Hans-Heinrich, 2003k:16006**
Kim, Jin-Yong *see* **Birkenmeier, Gary F. et al., 2003c:16040**
Kirichenko, Volodimir V. Decompositions of associative rings. (English summary) **2003j:16025**
Park, Jae Keol *see* **Birkenmeier, Gary F. et al., 2003c:16040**
Tuganbaev, A. A. Rings whose nonzero modules have maximal submodules. **2003f:16039**

16L60 Quasi-Frobenius rings [see also 16D50]

Chen, Jian Long (*with* Li, Wen Xi) Developments of three Faith conjectures in ring theory. (Chinese. English and Chinese summaries) **2003f:16034**
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Baba, Yoshitomo (*with* Miki, Hiroyuki) Symmetry of almost hereditary rings. **2003c:16013**
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Khurana, Dinesh Semiperfect rings and Nakayama permutations. (English summary) **2003c:16023**
Miki, Hiroyuki *see* **Baba, Yoshitomo, 2003c:16013**
Nicholson, W. K. (*with* Park, Jae Keol; Yousif, Mohamed F.) On simple-injective rings. (English summary) **2003f:16004**
Nonomura, Kazuaki On Nakayama rings. (*see* **2003c:16001**)
Park, Jae Keol *see* **Nicholson, W. K. et al., 2003f:16004**
Singh, Surjeet (*with* Al-Khamees, Yousif) Socle series of a commutative Artinian ring. (English summary) **2003d:13016**
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Yang, Cun Jie Actions of Hopf algebras on quasi-Frobenius algebras. (Chinese. English and Chinese summaries) **2003e:16056**
Yousif, Mohamed F. *see* **Wisbauer, Robert et al., 2003f:16003** *and* **Nicholson, W. K. et al., 2003f:16004**
Yue Chi Ming, Roger On p-injectivity, YJ-injectivity and quasi-Frobeniusean rings. (English summary) **2003c:16012**
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16L99 None of the above, but in this section

Items with secondary classifications in 16L99

Tuganbaev, A. A. Primitively pure submodules and primitively divisible modules. **2003g:16003**

16Nxx Radicals and radical properties of rings

16N20 Jacobson radical, quasimultiplication

Amberg, Bernhard (*with* Sysak, Yaroslav) Radical rings and their adjoint groups. **2003m:16026**
Coleman, Clare (*with* Easdown, David) Decomposition of rings under the circle operation. (English summary) **2003f:16035**
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Easdown, David *see* **Coleman, Clare, 2003f:16035**
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Sysak, Yaroslav *see* **Amberg, Bernhard, 2003m:16026**

Items with secondary classifications in 16N20

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Heatherly, Henry E. (*with* Tucci, Ralph P.) Adjoint Clifford rings. (English summary) **2003c:20076**
— (*with* Tucci, Ralph P.) Maximal ideals in near-rings and semigroups. (English summary) **2003g:16069**
Idelhadj, A. *see* **Martín González, Cándido et al., 2003b:16003**
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Sysak, Yaroslav Periodic subgroups of the adjoint group of a radical ring. **2003i:20059**
Tucci, Ralph P. *see* **Heatherly, Henry E., 2003c:20076** *and* **2003g:16069**
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16N40 Nil and nilpotent radicals, sets, ideals, rings

Ferrero, Miguel A. Unitary strongly prime rings and ideals. (English summary) (*see* **2003k:16001**)
Hammoudi, Lakhdar On the n-nilpotency. (English summary) **2003h:16028**
Kirichenko, Volodimir V. Decompositions of associative rings. (English summary) **2003j:16025**
Petravchuk, Anatoliĭ P. On the sum of two associative rings, one of which has a zero square. (Ukrainian. English and Ukrainian summaries)
Smoktunowicz, Agata On some results related to Köthe's conjecture. (English summary) **2003a:16030**
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Kim, Nam Kyun (*with* Lee, Yang) On rings whose prime ideals are completely prime. (English summary) **2003e:16002**
Koreshkov, N. A. (*with* Kharitonov, D. Yu.) On the nilpotency of Engel algebras. (Russian) **2003c:17003**
Krasil'nikov, A. N. (*with* Riley, David M.) The transfer of a commutator identity in a nil-generated algebra. (English summary) **2003d:16041**
Lee, Yang *see* **Kim, Nam Kyun, 2003e:16002**
Nagahara, Takasi (*with* Yaqub, Adil) Classification of rings satisfying some Herstein's condition on the set of all non-nilpotents. (English summary) **2003e:16038**
Riley, David M. *see* **Krasil'nikov, A. N., 2003d:16041**
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Tumurbat, S. The radicalness of polynomial rings over nil rings. (English summary) **2003h:16034**
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16N60 Prime and semiprime rings [see also 16D60, 16U10]

Aydin, Neşet (*with* Kaya, Kâzim; Gölbaşi, Öznur) Some results on one-sided generalized Lie ideals with derivation. (English summary) **2003m:16027**
Bell, Howard E. On zero subrings and periodic subrings. (English summary) **2003a:16031**
Birkenmeier, Gary F. (*with* Park, Jae Keol) Piecewise prime rings. **2003c:16024**
— (*with* Kim, Jin-Yong; Park, Jae Keol) Prime ideals of principally quasi-Baer rings. (English summary) **2003k:16032**
Chuang, Chen-Lian (*with* Lee, Tsiu-Kwen) A note on certain subgroups of prime rings with derivations. (English summary) **2003d:16024**
De Filippis, Vincenzo Automorphisms on multilinear polynomials in prime rings. (English summary) **2003g:16025**
— (*with* Di Vincenzo, Onofrio Mario) An Engel condition with derivation for multilinear polynomials in prime rings. (English summary) **2003i:16033**
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Ferrero, Miguel A. (*with* Haetinger, Claus) Higher derivations of semiprime rings. (English summary) **2003d:16025**
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Khokhlov, Andreĭ Vladimirovich Stable subsets and the existence of a unit in (semi-)prime rings. (Russian. Russian summary) **2003h:16030**
Kim, Jin-Yong *see* **Birkenmeier, Gary F. et al., 2003k:16032**
Lee, Tsiu-Kwen (*with* Wong, Tsai-Lien) On certain subgroups of prime rings with automorphisms. (English summary) **2003k:16033**
— Prime rings with finiteness properties on one-sided ideals. (English summary) **2003c:16025**
— *see also* **Chuang, Chen-Lian, 2003d:16024**
Niu, Feng-wen *see* **Wei, Feng et al., 2003g:16027**
Park, Jae Keol *see* **Birkenmeier, Gary F. et al., 2003c:16024** *and* **2003k:16032**
Samman, M. S. *see* **Thaheem, A. B., 2003h:16031**
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Thaheem, A. B. (*with* Samman, M. S.) Centralizing mappings on semiprime rings. (English summary) **2003h:16031**
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— *see also* **Lee, Tsiu-Kwen, 2003k:16033**
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Ashraf, Mohammad On Jordan left derivations of Lie ideals in prime rings. (English summary) **2003h:16056**
— (*with* Nadeem-ur-Rehman) On (σ, τ)-derivations in prime rings. (English summary) **2003j:16043**
— (*with* Nadeem-ur-Rehman) On semiderivations and commutativity of certain rings. (English summary) **2003h:16057**
— (*with* Nadeem-ur-Rehman; Ali, Shakir) On Lie ideals and Jordan generalized derivations of prime rings. (English summary)
Beidar, K. I. (*with* Brešar, Matej; Chebotar, M. A.) Functional identities with r-independent coefficients. **2003j:16030**
— (*with* Chen, Tung-Shyan; Fong, Yuen; Ke, W.-F.) On graded polynomial identities with an antiautomorphism. (English summary) **2003j:16028**
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van den Berg, John E. Primeness described in the language of torsion preradicals. (English summary) **2003c:06016**
Blau, Philip S. Lie isomorphisms of prime rings satisfying St_4. (English summary) **2003h:16054**
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Chebotar, M. A. (*with* Lee, Pjek Hwee; Wong, Tsai-Lien) A note on derivations, additive subgroups, and Lie ideals of prime rings. (English summary) **2003m:16047**
— (*with* Lee, Pjek Hwee) A note on compositions of derivations of prime rings. (English summary)
— *see also* **Beidar, K. I. et al., 2003j:16030**
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Ferrero, Miguel A. (*with* Haetinger, Claus) Higher derivations and a theorem by Herstein. (English summary) **2003f:16057**
Fong, Yuen *see* **Beidar, K. I. et al., 2003j:16028**
Groenewald, Nico J. Prime near rings and special radicals. (English summary) **2003d:16055**
Haetinger, Claus *see* **Ferrero, Miguel A., 2003f:16057**
Hirano, Yasuyuki On annihilator ideals of a polynomial ring over a noncommutative ring. (English summary) **2003a:16038**
Jung, Yong-Soo Bi-additive maps and commutativity in rings. (English summary) **2003k:16046**
— *see also* **Lee, Eun Hwi et al., 2003e:16041**
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Munn, W. D. Rings graded by inverse semigroups. **2003a:16061**
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Pan, Ching-Yueh *see* **Lee, Tsiu-Kwen, 2003d:16045**
Quadri, Murtaza A. (*with* Khan, Mohd. Shadab) On Lie ideals and derivations in prime rings. (English summary)
Shiue, Wen-Kwei Annihilators of derivations with Engel conditions on one-sided ideals. (English summary) **2003k:16051**
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Thaheem, A. B. *see* **Chaudhry, Muhammad Anwar**
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Wang, Yu[2] The ranges of additive maps in generalized functional identities on prime rings. (English summary) **2003c:16035**
— Symmetric bi-derivation of prime rings. (Chinese. English and Chinese summaries)
— (*with* Zhang, Xiu Ying) The linear combination of derivations in prime rings. (English summary)
Whelan, E. A. Surjectivity of the ideal extension map $\mathbb{I}(R) \to \mathbb{I}(R[X, X^{-1}; \sigma])$. (English summary) **2003c:16038**
Wong, Tsai-Lien *see* **Chebotar, M. A. et al., 2003m:16047**
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Zhang, Shu Hua[2] (*with* Niu, Feng-wen) Derivations on semiprime rings. (English and Chinese summaries)
Zhang, Xiu Ying *see* **Wang, Yu[2]**

16N80 General radicals and rings {For radicals in module categories, see 16S90.}

Beidar, K. I. (*with* Ke, W.-F.; Puczyłowski, E. R.) On subhereditary radicals and reduced rings. (English summary) **2003d:16026**
France-Jackson, H. (*with* Leavitt, W. G.) On β-classes. (English summary) **2003d:16027**
— On similar special classes. (English summary)
— (*with* Le Roux, H. J.) A note on $*_g$-rings. (English summary)
Hirano, Yasuyuki (*with* Tsutsui, Hisaya) On splitting superhereditary preradicals. (English summary) (*see* **2003c:16001**)
Ke, W.-F. *see* **Beidar, K. I. et al., 2003d:16026**
Leavitt, W. G. *see* **France-Jackson, H., 2003d:16027**
Le Roux, H. J. *see* **France-Jackson, H.**
Puczyłowski, E. R. *see* **Beidar, K. I. et al., 2003d:16026**
Ren, Yan Li (*with* Wang, Yao[3]) Characterizations of semisimple classes of normal algebra objects. (Chinese. English and Chinese summaries)
Tsutsui, Hisaya *see* **Hirano, Yasuyuki, (2003c:16001)**
Tumurbat, S. (*with* Wiegandt, Richard) On subhereditary radicals and Brown-McCoy semisimple rings. (English, Romanian and Russian summaries) **2003i:16034**
— On principally left strong radicals. (English summary) **2003h:16033**
— Some issues in the theory of supernilpotent radicals. (English summary) **2003m:16028**
— (*with* Wiegandt, Richard) A note on special radicals and partitions of simple rings. (English summary) **2003a:16032**
— The radicalness of polynomial rings over nil rings. (English summary) **2003h:16034**
Wang, Yao[3] *see* **Ren, Yan Li**
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Yu, Shu Lan The upper radical determined by the class of all U-semisimple subdirectly irreducible rings. (Chinese. English and Chinese summaries)
— Some characterizations of the upper radical determined by the class of all J-semisimple subdirectly irreducible rings. (Chinese. English and Chinese summaries)
Zhang, Fu-li A note on the supersemiprime rings and supersemiprime radical. (English and Chinese summaries)

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Groenewald, Nico J. The almost nilpotent radical for near rings. (English summary) **2003g:16067**
— Prime near rings and special radicals. (English summary) **2003d:16055**
Li, Li Bin *see* **Wei, Jun Chao, 2003g:16062**
Rao, Ravi Srinivasa A characterization of the J_0-radical in matrix near-rings with DCCL.
Reng, Yan Li *see* **Wang, Yao[3]**
Veldsman, Stefan On the radicals of composition near-rings. (English summary) (*see* **2003f:16001**)
Wang, Yao[3] (*with* Reng, Yan Li) Radicals and semisimple classes of general algebra objects. (Chinese. English and Chinese summaries)
Wei, Jun Chao (*with* Li, Li Bin) Graded antisimple primitive radical. (English summary) **2003g:16062**
Wiegandt, Richard *see* **Birkenmeier, Gary F., 2003d:16054**

16N99 None of the above, but in this section

Levchuk, V. M. (*with* Suleĭmanova, G. S.) The normal structure of an adjoint group in the radical rings $R_n(K, J)$. (Russian. Russian summary) **2003g:16028**
Ren, Yan Li *see* **Wang, Yao[3]**
Suleĭmanova, G. S. *see* **Levchuk, V. M., 2003g:16028**
Wang, Yao[3] (*with* Ren, Yan Li) Graded radicals determined by e-component. (Chinese. English and Chinese summaries)

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André, Yves[1] (*with* Kahn, Bruno; O'Sullivan, Peter) Nilpotence, radicaux et structures monoïdales. (English summary) [Nilpotency, radicals and monoidal structures] **2003m:18009**
Du, Xiankun The adjoint semigroup of a ring. **2003i:20118**
Fernández-Alonso, Rogelio *see* **Raggi, Francisco et al., 2003m:16043**
Hebisch, U. (*with* Weinert, H. J.) Semisimple classes of semirings. (English summary) **2003e:16062**
Kahn, Bruno *see* **André, Yves[1] et al., 2003m:18009**
O'Sullivan, Peter *see* **André, Yves[1] et al., 2003m:18009**
Raggi, Francisco (*with* Ríos Montes, José; Rincón-Mejía, Hugo Alberto; Fernández-Alonso, Rogelio; Signoret P., Carlos J. E.) The lattice structure of preradicals. II. Partitions. (English summary) **2003m:16043**
Rincón-Mejía, Hugo Alberto *see* **Raggi, Francisco et al., 2003m:16043**
Ríos Montes, José *see* **Raggi, Francisco et al., 2003m:16043**
Signoret P., Carlos J. E. *see* **Raggi, Francisco et al., 2003m:16043**
Weinert, H. J. *see* **Hebisch, U., 2003e:16062**

16Pxx Chain conditions, growth conditions, and other forms of finiteness

16P10 Finite rings and finite-dimensional algebras {For semisimple, see 16K20; for commutative, see 11Txx, 13Mxx.}

Dolžan, David Group of units in a finite ring. (English summary) **2003c:16026**
Gaĭnov, A. T. Z_n-orthograded monocomposition algebras. (Russian. Russian summary) **2003g:16029**
Pei, Yin Shu Finiteness of rings with maximal subrings. (Chinese. English and Chinese summaries)
Williams, Graham D. Projective congruence in $M_3(\mathbf{F}_q)$. (English summary) **2003f:16036**

Items with secondary classifications in 16P10

Greferath, Marcus Orthogonality matrices for modules over finite Frobenius rings and MacWilliams' equivalence theorem. (English summary) **2003d:94107**

16P20 Artinian rings and modules

Ghorbani, Atefeh A characterization of right Artinian rings. (English summary)
Karamzadeh, O. A. S. (*with* Nejad, A. R. Sajedi) On the Loewy length and the Noetherian dimension of Artinian modules. **2003c:16027**
Motamedi, M. a-Artinian modules. (English summary) **2003c:16028**
Nejad, A. R. Sajedi *see* **Karamzadeh, O. A. S., 2003c:16027**
Nonomura, Kazuaki On Nakayama rings. (*see* **2003c:16001**)
Nüsken, Michael Unique tensor factorization of loop-resistant algebras over a field of finite characteristic. (English summary) **2003f:16037**

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Ara, Pere (*with* O'Meara, Kevin C.; Perera, Francesc) Stable finiteness of group rings in arbitrary characteristic. (English summary) **2003j:16035**
Baba, Yoshitomo (*with* Miki, Hiroyuki) Symmetry of almost hereditary rings. **2003c:16013**
— (*with* Miki, Hiroyuki) On strongly almost hereditary rings. **2003i:16015**
Birkenmeier, Gary F. (*with* Kim, Jin-Yong; Park, Jae Keol) Triangular matrix representations of semiprimary rings. (English summary) **2003c:16040**
D'Ambrosia, Barbara K. Global dimension of transitive square-free rings. (English summary) **2003f:16012**
Fernández-Alonso, Rogelio *see* **Raggi, Francisco et al., 2003b:16034**
Kim, Jin-Yong *see* **Birkenmeier, Gary F. et al., 2003c:16040**

Miki, Hiroyuki *see* **Baba, Yoshitomo, 2003c:16013***and* **2003i:16015**
O'Meara, Kevin C. *see* **Ara, Pere et al., 2003j:16035**
Park, Jae Keol *see* **Birkenmeier, Gary F. et al., 2003c:16040**
Perera, Francesc *see* **Ara, Pere et al., 2003j:16035**
Puninski, G. T. Artinian and Noetherian serial rings. **2003g:16030**
Raggi, Francisco (*with* Rios Montes, José; Rincón-Mejía, Hugo Alberto; Fernández-Alonso, Rogelio; Signoret P., Carlos J. E.) The lattice structure of preradicals. (English summary) **2003b:16034**
Rincón-Mejía, Hugo Alberto *see* **Raggi, Francisco et al., 2003b:16034**
Ríos Montes, José *see* **Raggi, Francisco et al., 2003b:16034**
Signoret P., Carlos J. E. *see* **Raggi, Francisco et al., 2003b:16034**
Yue Chi Ming, Roger On p-injectivity, YJ-injectivity and quasi-Frobeniusean rings. (English summary) **2003c:16012**

16P40 Noetherian rings and modules

Braun, Amiram (*with* Hajarnavis, Charudatta R.) Generator ideals in Noetherian PI rings. **2003a:16033**
Hajarnavis, Charudatta R. *see* **Braun, Amiram, 2003a:16033**
Yukimoto, Yoshito A characterization of Noetherian rings and its dual. (English summary) (*see* **2003k:16001**)

Items with secondary classifications in 16P40

Artemovich, O. D. Differentially trivial Noetherian semiperfect rings. (English summary) **2003m:16024**
Behboodi, M. (*with* Koohy, H.) On minimal prime submodules. (English summary) **2003g:16004**
Karamzadeh, O. A. S. (*with* Nejad, A. R. Sajedi) On the Loewy length and the Noetherian dimension of Artinian modules. **2003c:16027**
Koohy, H. *see* **Behboodi, M., 2003g:16004**
Nejad, A. R. Sajedi *see* **Karamzadeh, O. A. S., 2003c:16027**
Puninski, G. T. Artinian and Noetherian serial rings. **2003g:16030**

16P50 Localization and Noetherian rings [see also 16U20]

Tushnits'kiĭ, Ī. Ya. Rings with locally defined ideals. (Ukrainian. English and Russian summaries) **2003h:16035**

Items with secondary classifications in 16P50

Howson, Susan Structure of central torsion Iwasawa modules. (English and French summaries) **2003j:11134**
Pérez, Jaime Castro (*with* Ríos Montes, José; Teply, Mark L.) Torsion theoretic dimensions and relative Gabriel correspondence. (English summary) **2003j:16040**
Ríos Montes, José *see* **Pérez, Jaime Castro et al., 2003j:16040**
Teply, Mark L. *see* **Pérez, Jaime Castro et al., 2003j:16040**

16P60 Chain conditions on annihilators and summands: Goldie-type conditions [see also 16U20], Krull dimension

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16P70 Chain conditions on other classes of submodules, ideals, subrings, etc.; coherence

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16Rxx Rings with polynomial identity

16R10 T-ideals, identities, varieties of rings and algebras

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16R20 Semiprime p.i. rings, rings embeddable in matrices over commutative rings

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16R40 Identities other than those of matrices over commutative rings

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16Sxx Rings and algebras arising under various constructions

16S10 Rings determined by universal properties (free algebras, coproducts, adjunction of inverses, etc.)

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16S36 Ordinary and skew polynomial rings and semigroup rings [see also 20M25]

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16S38 Rings arising from non-commutative algebraic geometry

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16Uxx Conditions on elements

16U20 Ore rings, multiplicative sets, Ore localization

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16U30 Divisibility, noncommutative UFDs

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16U60 Units, groups of units

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16U70 Center, normalizer (invariant elements)

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16U80 Generalizations of commutativity

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Hong, Chan Yong (*with* Kim, Nam Kyun; Kwak, Tai Keun) On the maximality of prime ideals in exchange rings. (English summary) **2003f:16017**
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Kim, Nam Kyun *see* **Hong, Chan Yong et al., 2003f:16017**
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Park, Kyoo-Hong (*with* Jung, Yong-Soo) Skew-commuting and commuting mappings in rings. (English summary) **2003f:16042**

16U99 None of the above, but in this section

He, Ji Nil-factors in a ring. (Chinese. English and Chinese summaries)
Koliha, J. J. (*with* Patrício, Pedro) Elements of rings with equal spectral idempotents. (English summary) **2003b:16037**
Nagahara, Takasi (*with* Yaqub, Adil) Classification of rings satisfying some Herstein's condition on the set of all non-nilpotents. (English summary) **2003e:16038**
Patrício, Pedro *see* **Koliha, J. J., 2003b:16037**
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Badawi, Ayman (*with* Chin, Angelina Y. M.; Chen, H. V.) On rings with near idempotent elements. (English summary) **2003d:16008**
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Buhphang, Ardeline Mary (*with* Rege, M. B.) Semi-commutative modules and Armendariz modules. (English summary) **2003k:16011**
Chen, H. V. *see* **Badawi, Ayman et al., 2003d:16008**
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Chin, Angelina Y. M. *see* **Badawi, Ayman et al., 2003d:16008**
Ehrhardt, Torsten (*with* Rabanovich, V. I.; Samoĭlenko, Yuriĭ S.; Silbermann, Bernd) On the decomposition of the identity into a sum of idempotents. (English summary) **2003d:47092**
Khosravi, Amir (*with* Alizadeh, M. H.) Generalized inverses of products. (English summary) **2003i:46056**
Koliha, J. J. (*with* Rakočević, Vladimir) Invertibility of the sum of idempotents. (English summary) **2003h:47001**
Li, Fu An *see* **Chen, Huan Yin, 2003e:16008**
Rabanovich, V. I. *see* **Ehrhardt, Torsten et al., 2003d:47092**
Rakočević, Vladimir *see* **Koliha, J. J., 2003h:47001**
Rege, M. B. *see* **Buhphang, Ardeline Mary, 2003k:16011**
Samoĭlenko, Yuriĭ S. *see* **Ehrhardt, Torsten et al., 2003d:47092**
Silbermann, Bernd *see* **Ehrhardt, Torsten et al., 2003d:47092**

16Wxx Rings and algebras with additional structure

16W10 Rings with involution; Lie, Jordan and other nonassociative structures [see also 17B60, 17C50, 46Kxx]

Beidar, K. I. (*with* Brešar, Matej; Chebotar, M. A.; Martindale, W. S., 3rd) On Herstein's Lie map conjectures. III. (English summary) **2003c:16042**
Birkenmeier, Gary F. (*with* Kim, Jin-Yong; Park, Jae Keol) Erratum: "Principally quasi-Baer rings" [Comm. Algebra **29** (2001), no. 2, 639–660; MR 2002f:16076]. **Blau, Philip S.** Lie isomorphisms of prime rings satisfying St_4. (English summary) **2003h:16054**
Brešar, Matej *see* **Beidar, K. I. et al., 2003c:16042**
Catino, F. (*with* Miccoli, M. M.) Note on strongly Lie nilpotent rings. (English summary) **2003a:16047**
Chebotar, M. A. *see* **Beidar, K. I. et al., 2003c:16042**
Golasiński, Marek (*with* Gómez Ruiz, Francisco) On Grassmannians over $*$-rings. (English summary) **2003h:16055**
Gómez Ruiz, Francisco *see* **Golasiński, Marek, 2003h:16055**
Kim, Jin-Yong *see* **Birkenmeier, Gary F. et al.**
Knus, Max-Albert (*with* Parimala, R.; Sridharan, Ramaiengar) On generic triality. **2003j:16041**
Martindale, W. S., 3rd *see* **Beidar, K. I. et al., 2003c:16042**
Mazorchuk, Volodymyr (*with* Turowska, Lyudmila B.) Existence and uniqueness of σ-forms on finite-dimensional modules. (English summary) **2003g:16043**
Miccoli, M. M. *see* **Catino, F., 2003a:16047**
Parimala, R. *see* **Knus, Max-Albert et al., 2003j:16041**
Park, Jae Keol *see* **Birkenmeier, Gary F. et al.**
Sridharan, Ramaiengar *see* **Knus, Max-Albert et al., 2003j:16041**
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Koliha, J. J. (*with* Patrício, Pedro) Elements of rings with equal spectral idempotents. (English summary) **2003m:16037**
– (*with* Rakočević, Vladimir) Invertibility of the difference of idempotents. (English summary) **2003m:16044**
Lewis, David W. (*with* Scheiderer, Claus; Unger, Thomas P.) A weak Hasse principle for central simple algebras with an involution. (English summary) **2003c:16021**
Patrício, Pedro *see* **Koliha, J. J., 2003b:16037**
Petersson, Holger P. (*with* Racine, Michel L.) Octonion algebras obtained from associative algebras with involution. (English summary) **2003a:17004**
Pumplün, Susanne (*with* Unger, Thomas P.) The Hermitian level of composition algebras. (English summary) **2003j:17005**
Racine, Michel L. *see* **Petersson, Holger P., 2003a:17004**
Rakočević, Vladimir *see* **Koliha, J. J., 2003m:16044**
Scheiderer, Claus *see* **Lewis, David W. et al., 2003c:16021**
Serhir, A. Niveau hermitien d'une algèbre de quaternions à division munie d'une involution de deuxième espèce. (English summary) [Hermitian level of a quaternion division algebra with involution of the second kind] **2003i:16029**
Unger, Thomas P. *see* **Lewis, David W. et al., 2003c:16021** *and* **Pumplün, Susanne, 2003j:17005**
Yoshii, Yoji Classification of quantum tori with involution. (English summary) **2003i:16060**
Zhao, Kaiming Simple algebras of Weyl type. II. (English summary) **2003a:16004**

16W20 Automorphisms and endomorphisms

Bordemann, Martin (*with* Medina, Alberto) Le groupe des transformations affines d'un groupe de Lie à structure affine bi-invariante. (English summary) [The affine transformation group of a Lie group with bi-invariant structure] **2003i:16050**
Cohn, P. M. The automorphism group of the free algebra of rank two. (English summary) **2003j:16042**
Hu, Fu Gao Power endomorphisms of a ring without zero divisor. (Chinese. English and Chinese summaries)
Lü, Rencai (*with* Zhao, Kaiming) Automorphism groups of Weyl-type algebras. (English summary) **2003b:16038**
Medina, Alberto *see* **Bordemann, Martin, 2003i:16050**
Szeto, George (*with* Xue, Lianyong) On some correspondence relations of an Azumaya algebra with a finite automorphism group. (English summary) **2003k:16047**
– (*with* Xue, Lianyong) The Boolean algebra of Galois algebras. (English summary) **2003m:16046**
Xue, Lianyong *see* **Szeto, George, 2003k:16047** *and* **2003m:16046**
Zhao, Kaiming *see* **Lü, Rencai, 2003b:16038**

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Ben Yakoub, L. (*with* El Kaoutit, L.; Malliavin, M. P.) Sur les algèbres d'Heisenberg quantiques. (French summary) [On quantum Heisenberg algebras] **2003c:16055**
Bleher, Frauke M. (*with* Chinburg, Ted) Locations of modules for Brauer tree algebras. (English summary) **2003d:16022**
Brešar, Matej On automorphisms of Banach algebras. (English summary) **2003a:46068**
— *see also* **Beidar, K. I. et al., 2003c:16042**
Cao, You An *see* **Tan, Zuo Wen et al., 2003d:16039**
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Chinburg, Ted *see* **Bleher, Frauke M., 2003d:16022**
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Gaĭnov, A. T. Z_n-orthograded monocomposition algebras. (Russian. Russian summary) **2003g:16029**
Haile, Darrell E. (*with* Morandi, Patrick J.) Hyperbolicity of algebras with involution and connections with Clifford algebras. (English summary) **2003a:16026**
Lee, Tsiu-Kwen (*with* Wong, Tsai-Lien) On certain subgroups of prime rings with automorphisms. (English summary) **2003k:16033**
Malliavin, M. P. *see* **Ben Yakoub, L. et al., 2003c:16055**
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Morandi, Patrick J. *see* **Haile, Darrell E., 2003a:16026**
Richard, Lionel Sur les endomorphismes des tores quantiques. (English summary) [Endomorphisms of quantum tori] **2003j:16050**
Szeto, George (*with* Xue, Lianyong) On splitting rings for Azumaya skew polynomial rings. (English summary) **2003a:16039**
— (*with* Xue, Lianyong) Notes on Galois algebras. (English summary) **2003f:16056**
— (*with* Xue, Lianyong) The Galois algebras and the Azumaya Galois extensions. (English summary) **2003e:16040**
— (*with* Xue, Lianyong) On Azumaya automorphism extensions of rings. (English summary) **2003c:16037**
Tan, Zuo Wen (*with* Yang, Yu Yue; Cao, You An) Automorphisms of strictly upper triangular matrix rings over commutative rings. (Chinese. English and Chinese summaries) **2003d:16039**
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Xue, Lianyong The invariant subrings of Demeyer-Kanzaki Galois extensions. (English summary) **2003a:16037**
— *see also* **Szeto, George, 2003a:16039; 2003c:16037; 2003e:16040** *and* **2003f:16056**
Yang, Yu Yue *see* **Tan, Zuo Wen et al., 2003d:16039**

16W22 Actions of groups and semigroups; invariant theory

Aljadeff, Eli (*with* Kassel, Christian) Explicit norm one elements for ring actions of finite abelian groups. (English summary) **2003e:16039**
Göbel, Manfred (*with* Kredel, Heinz) Reduction of permutation-invariant polynomials. A noncommutative case study. (English summary) **2003d:16044**
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Szeto, George (*with* Xue, Lianyong) The generalized center Galois extensions of rings. (English summary) **2003k:16048**
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Xue, Lianyong *see* **Szeto, George, 2003b:16039; 2003e:16040; 2003f:16056** *and* **2003k:16048**

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Mishchenko, Sergei *see* **Giambruno, A. et al., 2003h:16037**
Suarez-Alvarez, Mariano Algebra structure on the Hochschild cohomology of the ring of invariants of a Weyl algebra under a finite group. (English summary) **2003a:16012**
Szeto, George (*with* Xue, Lianyong) On some correspondence relations of an Azumaya algebra with a finite automorphism group. (English summary) **2003k:16047**
Xue, Lianyong *see* **Szeto, George, 2003k:16047**
Zaĭtsev, M. V. *see* **Giambruno, A. et al., 2003h:16037**

16W25 Derivations, actions of Lie algebras

Albaş, E. *see* **Argaç, Nurcan, 2003i:16051**
Ali, Asma (*with* Ali, Shakir; Nadeem-ur-Rehman) Jordan automorphisms on Lie ideals of prime rings. (English summary)
Ali, Shakir *see* **Ali, Asma et al.** *and* **Ashraf, Mohammad et al.**
Al-Shammakh, Wafa S. M. *see* **Ashraf, Mohammad**
Argaç, Nurcan (*with* Albaş, E.) On generalized (σ, τ)-derivations. (Russian. Russian summary) **2003i:16051**
Ashraf, Mohammad On Jordan left derivations of Lie ideals in prime rings. (English summary) **2003h:16056**
— (*with* Nadeem-ur-Rehman) On (σ, τ)-derivations in prime rings. (English summary) **2003j:16043**
— (*with* Al-Shammakh, Wafa S. M.) On generalized (θ, φ)-derivations in rings. (English summary)
— (*with* Nadeem-ur-Rehman) On semiderivations and commutativity of certain rings. (English summary) **2003h:16057**
— (*with* Nadeem-ur-Rehman; Ali, Shakir) On Lie ideals and Jordan generalized derivations of prime rings. (English summary)
Chang, Ick-Soon (*with* Jun, Kil-Woung; Jung, Yong-Soo) On derivations in Banach algebras. (English summary) **2003h:16058**
— *see also* **Lee, Eun Hwi et al., 2003e:16041**
Chang, Jui-Chi On the identity $h(x) = af(x) + g(x)b$. (English summary) **2003k:16049**
Chaudhry, Muhammad Anwar (*with* Thaheem, A. B.) On (α, β)-derivations of semiprime rings. (English summary)
Chebotar, M. A. (*with* Lee, Pjek Hwee; Wong, Tsai-Lien) A note on derivations, additive subgroups, and Lie ideals of prime rings. (English summary) **2003m:16047**
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Cho, Yong Uk (*with* Jun, Young Bae) Gamma-derivations in prime and semiprime gamma-near-rings. (English summary)
Chuang, Chen-Lian (*with* Lee, Tsiu-Kwen) Finite products of derivations in prime rings. (Engiish summary) **2003b:16040**
Ferreira, Vitor de Oliveira Constants of derivations on free associative algebras. (English summary) **2003a:16048**
Ferrero, Miguel A. (*with* Haetinger, Claus) Higher derivations and a theorem by Herstein. (English summary) **2003f:16057**
Grzeszczuk, Piotr (*with* Matczuk, Jerzy) The prime radical of constants of algebraic q-skew derivations. (English summary) **2003j:16044**
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Haetinger, Claus *see* **Ferrero, Miguel A., 2003f:16057**
Hamaguchi, Naoki Jordan derivations of a skew matrix ring. (English summary) **2003a:16049**
Jun, Kil-Woung *see* **Chang, Ick-Soon et al., 2003h:16058**
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Neher, Erhard (*with* Yoshii, Yoji) Derivations and invariant forms of Jordan and alternative tori. (English summary) **2003i:16052**
Niu, Feng-wen *see* **Zhang, Shu Hua^2**
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Quadri, Murtaza A. (*with* Khan, Mohd. Shadab) On Lie ideals and derivations in prime rings. (English summary)
Shiue, Wen-Kwei Annihilators of derivations with Engel conditions on one-sided ideals. (English summary) **2003k:16051**
Thaheem, A. B. *see* **Chaudhry, Muhammad Anwar**
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Wiehl, M. Local derivations on the Weyl algebra with one pair of generators. (English summary) **2003h:16059**
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Artemovich, O. D. Differentially trivial Noetherian semiperfect rings. (English summary) **2003m:16024**
Ashraf, Mohammad (*with* Nadeem-ur-Rehman) On commutativity of rings with derivations. (English summary) **2003h:16053**
Aydin, Neşet (*with* Kaya, Kâzim; Gölbaşi, Öznur) Some results on one-sided generalized Lie ideals with derivation. (English summary) **2003m:16027**
Bell, Howard E. *see* **Argaç, Nurcan, (2003f:16001)**
Ben Yakoub, L. (*with* El Kaoutit, L.; Malliavin, M. P.) Sur les algèbres d'Heisenberg quantiques. (French summary) [On quantum Heisenberg algebras] **2003c:16055**
Chuang, Chen-Lian (*with* Lee, Tsiu-Kwen) A note on certain subgroups of prime rings with derivations. (English summary) **2003d:16024**
De Filippis, Vincenzo (*with* Di Vincenzo, Onofrio Mario) An Engel condition with derivation for multilinear polynomials in prime rings. (English summary) **2003i:16033**
— On a subset with nilpotent values in a prime ring with derivation. (English and Italian summaries) **2003g:16026**
Di Vincenzo, Onofrio Mario *see* **De Filippis, Vincenzo, 2003i:16033**
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Farkas, Daniel R. (*with* Geiss, Christof; Marcos, Eduardo do Nascimento) Smooth automorphism group schemes. (English summary) **2003b:14058**
Ferrero, Miguel A. (*with* Haetinger, Claus) Higher derivations of semiprime rings. (English summary) **2003d:16025**
Geiss, Christof *see* **Farkas, Daniel R. et al., 2003b:14058**
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Jun, Kil-Woung (*with* Kim, Hark-Mahn) The range of derivations on Banach algebras. (English summary) **2003a:46075**
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Jung, Yong-Soo Bi-additive maps and commutativity in rings. (English summary) **2003k:16046**
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Kim, Kyung Ho *see* **Öztürk, Mehmet Ali et al., 2003h:16079**
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Malliavin, M. P. *see* **Ben Yakoub, L. et al., 2003c:16055**
Marcos, Eduardo do Nascimento *see* **Farkas, Daniel R. et al., 2003b:14058**
Nadeem-ur-Rehman On commutativity of rings with generalized derivations. (English summary)
— *see also* **Ashraf, Mohammad, 2003h:16053**
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Van den Bergh, Michel (*with* Van Gastel, Martine) On the structure of non-commutative regular local rings of dimension two. (English summary) **2003h:16045**
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Voiculescu, Dan Cyclomorphy. **2003a:46092**
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Zhao, Kaiming Simple algebras of Weyl type. II. (English summary) **2003a:16004**

16W30 Coalgebras, bialgebras, Hopf algebras [see also 16S40, 57T05]; rings, modules, etc. on which these act

Abella, Andrés (*with* Andruskiewitsch, Nicolás) Compact matrix quantum groups arising from Hermitian Yang-Baxter coalgebras. **2003g:16044**
Al-Solamy, Falleh R. (*with* Beggs, Edwin J.) A generalised Hopf algebra for solitons. (English summary) **2003e:16042**
Al-Takhman, Khaled The com and cotensor functors for coalgebras over rings. **2003c:16043**
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Andruskiewitsch, Nicolás (*with* Schneider, Hans-Jürgen[2]) Pointed Hopf algebras. (English summary) **2003e:16043**
— About finite dimensional Hopf algebras. **2003f:16059**
— (*with* Dăscălescu, Sorin) Co-Frobenius Hopf algebras and the coradical filtration. (English summary) **2003m:16048**
— *see also* **Abella, Andrés, 2003g:16044**
Artamonov, Vyacheslav A. Actions of Hopf algebras on quantum polynomials. (English summary) **2003d:16046**
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Bakhturin, Yu. A. (*with* Kochetov, Mikhail; Montgomery, Susan) Polycharacters of cocommutative Hopf algebras. (English summary) **2003d:16047**
Beggs, Edwin J. *see* **Al-Solamy, Falleh R., 2003e:16042**
Bichon, Julien Cosemisimple Hopf algebras with antipode of arbitrary finite order. (English summary) **2003j:16045**
Brzeziński, Tomasz The structure of corings: induction functors, Maschke-type theorem, and Frobenius and Galois-type properties. (English summary) **2003h:16060**
— (*with* Militaru, Gigel) Bialgebroids, $\times_A$-bialgebras and duality. (English summary) **2003c:16044**
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Bulacu, Daniel (*with* Nauwelaerts, Erna) Radford's biproduct for quasi-Hopf algebras and bosonization. (English summary) **2003g:16045**
Caenepeel, Stefaan (*with* Militaru, Gigel; Zhu, Shenglin) ★ Frobenius and separable functors for generalized module categories and nonlinear equations. **2003h:16061**
— (*with* Militaru, Gigel) Maschke functors, semisimple functors and separable functors of the second kind: applications. (English summary) **2003j:16046**
Cegarra, Antonio M. On the classification of strongly graded Hopf algebras. (English summary) **2003e:16044**
Chen, Hui Xiang (*with* Wang, Shuan-Hong) Hopf modules, Miyashita-Ulbrich coactions, and monoidal center constructions. **2003d:16048**
— (*with* Zhang, Yun[2]; Liu, Ling; Wu, Feng) Irreducible representations of a class of finite-dimensional algebras. (English summary) **2003m:16050**
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Chin, William (*with* Kleiner, Mark; Quinn, Declan) Almost split sequences for comodules. (English summary) **2003e:16045**
Cuadra Díaz, Juan The Brauer group of irreducible coalgebras. (Spanish) **2003g:16046**
— (*with* Garcia Rozas, Juan Ramon; Torrecillas Jover, Blas; Van Oystaeyen, Freddy) On the Brauer group of a cocommutative coalgebra. (English summary) **2003a:16050**
— (*with* Gómez-Torrecillas, J.) Idempotents and Morita-Takeuchi theory. (English summary) **2003c:16045**
— (*with* Năstăsescu, C.; Van Oystaeyen, Freddy) Graded almost Noetherian rings and applications to coalgebras. **2003h:16062**
— (*with* Van Oystaeyen, Freddy) The strong Brauer group of a cocommutative coalgebra. (English summary) **2003b:16041**
Dăscălescu, Sorin *see* **Andruskiewitsch, Nicolás, 2003m:16048**
Didt, Daniel Linkable Dynkin diagrams. (English summary) **2003h:16063**
Doi, Yukio Group-like algebras. (Japanese. English summary) (*see* **2003k:16001**)
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16W50 Graded rings and modules

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16W55 "Super" (or "skew") structure [see also 17A70, 17Bxx, 17C70] {For exterior algebras, see 15A75; for Clifford algebras, see 11E88, 15A66.}

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16W60 Valuations, completions, formal power series and related constructions [see also 13Jxx]

Brungs, Hans-Heinrich (*with* Törner, Günter) Left valuation rings, left cones, and a question of Frege's. (English summary) **2003g:16063**
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16W70 Filtered rings; filtrational and graded techniques

Lobillo, F. J. On certain finitely presented algebras and filtrations. (English summary) **2003c:16060**

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16W80 Topological and ordered rings and modules [see also 06F25, 13Jxx]

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16W99 None of the above, but in this section

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16Yxx Generalizations {For nonassociative rings, see 17–XX.}

16Y30 Near-rings [see also 12K05]

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— On near-ring idempotents and polynomials on direct products of Ω-groups. (English summary) **2003a:16063**
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— (*with* Wiegandt, Richard) Supplementing radicals and decompositions of near-rings. (English summary) **2003d:16054**
— (*with* Huang, Feng-kuo) Annihilator conditions on formal power series. (English summary) **2003a:16064**
— (*with* Farag, Mark; Heatherly, Henry E.) Near-ring extensions with a common ideal. (English summary) **2003m:16063**
— *see also* **Errata: "Annihilator conditions on polynomials", 2003g:16075**
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— *see also* **Birkenmeier, Gary F. et al., 2003m:16063**
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Aichinger, Erhard The polynomial functions on certain semidirect products of groups. (English summary) **2003g:08002**
Cho, Yong Uk (*with* Jun, Young Bae) Gamma-derivations in prime and semiprime gamma-near-rings. (English summary)
Ésik, Zoltán *see* **Aceto, Luca et al., 2003m:68090**
Fong, Yuen (*with* Ke, W.-F.; Huang, Feng-kuo; Yeh, Yeong Nan) On semi-endomorphism of abelian groups. (English summary) (*see* **2003f:16001**)
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Maxson, C. J. (*with* Meyer, J. H.) Forcing linearity numbers for modules over simple domains. (English summary) **2003g:16001**
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Moch, Amie E. Forcing linearity numbers of semisimple modules over integral domains. (English summary) **2003g:16002**
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16Y60 Semirings [see also 12K10]

Ahn, Sun Shin (*with* Kim, Hee Sik) On r-ideals in incline algebras. (English summary) **2003c:16062**
Al-Thani, Huda Mohammed J. Characterizations of projective and k-projective semimodules. (English summary) **2003k:16058**
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Budimirović, Branka (*with* Budimirović, Vjekoslav; Šešelja, Branimir) On p-semirings. (English summary)
Budimirović, Vjekoslav *see* **Budimirović, Branka et al.**
Chen, Pei Ci (*with* Zhou, Yuan Lan) Tensor product of semimodules. (Chinese. English and Chinese summaries) **2003e:16061**
— *see also* **Yan, Yu-min, 2003k:16059** *and* **Gan, Ai Ping et al.**
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Ésik, Zoltán (*with* Kuich, Werner) Rationally additive semirings. (English summary) **2003a:16066**
— (*with* Kuich, Werner) Locally closed semirings. (English summary) **2003f:16074**
Gan, Ai Ping (*with* Huang, Fu Sheng; Chen, Pei Ci) The exact sequences of semimodules. (Chinese. English and Chinese summaries)
Ghosh, Shamik A complete characterization of Boolean semirings. (English summary) **2003a:16067**
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— *see also* **Aceto, Luca et al., 2003b:68144**
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16Y99 None of the above, but in this section

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Ali, T. *see* **Ray, Asok Kumer**
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— A note on fuzzy H_v-submodules. (English summary)
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Öztürk, Mehmet Ali (*with* Jun, Young Bae; Kim, Kyung Ho) On derivations of prime gamma rings. (English summary) **2003h:16079**
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Yao, Bing Xue (*with* Li, Hong Xing) Weak HX-rings on a ring. (English summary)
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Dvurečenskij, Anatolij Product effect algebras. (English summary) **2003j:81005**
Liu, Feng *see* **Sun, Li**
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Murali, V. (*with* Makamba, B. B.) Fuzzy direct sums and free submodules. (English summary) **2003h:16009**
— (*with* Makamba, B. B.) Fuzzy order ideals and torsion submodules. (English summary) **2003h:16010**
Sun, Li (*with* Liu, Feng) Anti-fuzzy factor groups and anti-fuzzy factor rings. (Chinese. English and Chinese summaries)
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16Z05 Computational aspects of associative rings [see also 68W30]

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Aichinger, Erhard (*with* Ecker, Jürgen; Nöbauer, Christof) The use of computers in near-rings theory. (English summary) (*see* **2003f:16001**)
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Takayama, Nobuki *see* **Oaku, Toshinori, 2003d:16033**

17–XX Nonassociative rings and algebras

17–01 Instructional exposition (textbooks, tutorial papers, etc.)

Bourbaki, Nicolas ★ Lie groups and Lie algebras. Chapters 4–6. **2003a:17001**
(Pressley, Andrew) *see* **Bourbaki, Nicolas, 2003a:17001**

Items with secondary classifications in 17–01

Lipkin, Harry J. ★ Lie groups for pedestrians. (English summary)

17–02 Research exposition (monographs, survey articles)

Panov, A. N. Quantum solvable algebras. Ideals and representations at roots of 1. (English summary) **2003h:17001**

17–03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 17–03

Berman, Stephen (*with* Parshall, Karen Hunger) Victor Kac and Robert Moody: their paths to Kac-Moody Lie algebras. **2003b:17029**
(Kac, Victor G.) *see* **Berman, Stephen, 2003b:17029**
(Moody, Robert V.) *see* **Berman, Stephen, 2003b:17029**
Parshall, Karen Hunger *see* **Berman, Stephen, 2003b:17029**

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Biography:
Kac, Victor G. *see* **Berman, Stephen, 2003b:17029**
Moody, Robert V. *see* **Berman, Stephen, 2003b:17029**

17–04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 17–04

Bremner, Murray Additive structure of free left-symmetric and assosymmetric rings. (English summary) **2003b:17004**

17–06 Proceedings, conferences, collections, etc.

(Bajo, Ignacio) *see* **Proceedings: Colloquium on Lie Theory and Applications, 2003h:17002**
(Berman, Stephen) *see* **Recent developments in infinite-dimensional Lie algebras and conformal field theory, 2003c:17001**
(Dobrev, V. K.) *see* **Colloquium: Group Theoretical Methods in Physics**
(Fendley, Paul) *see* **Recent developments in infinite-dimensional Lie algebras and conformal field theory, 2003c:17001**
(Huang, Yi-Zhi) *see* **Recent developments in infinite-dimensional Lie algebras and conformal field theory, 2003c:17001**
(Inomata, A.) *see* **Colloquium: Group Theoretical Methods in Physics**
(Misra, Kailash C.) *see* **Recent developments in infinite-dimensional Lie algebras and conformal field theory, 2003c:17001**
(Parshall, Brian J.) *see* **Recent developments in infinite-dimensional Lie algebras and conformal field theory, 2003c:17001**
(Pogosyan, George S.) *see* **Colloquium: Group Theoretical Methods in Physics**
(Sanmartín, Esperanza) *see* **Proceedings: Colloquium on Lie Theory and Applications, 2003h:17002**
(Sisakyan, A. N.) *see* **Colloquium: Group Theoretical Methods in Physics**

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Charlottesville, VA ★ Recent developments in infinite-dimensional Lie algebras and conformal field theory. **2003c:17001**
Colloquium:
Group Theoretical Methods in Physics ★ XXIII International Colloquium on Group Theoretical Methods in Physics.
Conference:
Infinite-Dimensional Lie Theory and Conformal Field Theory ★ Recent developments in infinite-dimensional Lie algebras and conformal field theory. **2003c:17001**
Contemporary Mathematics ★ Recent developments in infinite-dimensional Lie algebras and conformal field theory. **2003c:17001**
Dubna ★ XXIII International Colloquium on Group Theoretical Methods in Physics.
Proceedings:
Colloquium on Lie Theory and Applications ★ Proceedings of the I Colloquium on Lie Theory and Applications. **2003h:17002**
Recent developments in infinite-dimensional Lie algebras and conformal field theory ★ Recent developments in infinite-dimensional Lie algebras and conformal field theory. **2003c:17001**
Representation theory and harmonic analysis toward the new century ★ Shin seiki e no hyōgen ron to chōwa kaiseki. (Japanese) [Representation theory and harmonic analysis toward the new century] **2003a:17002**
Symposium:
Group Theory and Integrable Systems ★ XXIII International Colloquium on Group Theoretical Methods in Physics.
Quantum Groups ★ XXIII International Colloquium on Group Theoretical Methods in Physics.
Vigo ★ Proceedings of the I Colloquium on Lie Theory and Applications. **2003h:17002**

Items with secondary classifications in 17–06

(Arbarello, Enrico) *see* **Birthday: Procesi, Claudio**
(Bajo, Ignacio) *see* **Recent advances in Lie theory, 2003e:00034**
(Burdík, Č.) *see* **Quantum groups and integrable systems**
(De Concini, Corrado) *see* **Birthday: Procesi, Claudio**
(Guralnick, Robert M.) *see* **Special Issue: Celebrating the 80th birthday of Robert Steinberg, 2003m:00021**
(Hilgert, Joachim) *see* **Geometry and analysis on finite- and infinite-dimensional Lie groups, 2003a:00024**
(Littelmann, Peter) *see* **Birthday: Procesi, Claudio**
(Loefwall, Clas) *see* **Festschrift: Roos, Jan-Erik**
(Navrátil, O.) *see* **Quantum groups and integrable systems**
(Neeb, Karl-Hermann) *see* **Geometry and analysis on finite- and infinite-dimensional Lie groups, 2003a:00024**
(Procesi, Claudio) *see* **Birthday: Procesi, Claudio**
(Röhrle, Gerhard) *see* **Special Issue: Celebrating the 80th birthday of Robert Steinberg, 2003m:00021**
(Roos, Jan-Erik) *see* **Festschrift: Roos, Jan-Erik**
(Salvati-Manni, Riccardo) *see* **Birthday: Procesi, Claudio**
(Sanmartín, Esperanza) *see* **Recent advances in Lie theory, 2003e:00034**
(Steinberg, Robert) *see* **Special Issue: Celebrating the 80th birthday of Robert Steinberg, 2003m:00021**
(Strasburger, Aleksander) *see* **Geometry and analysis on finite- and infinite-dimensional Lie groups, 2003a:00024**
(Wojtyński, Wojciech) *see* **Geometry and analysis on finite- and infinite-dimensional Lie groups, 2003a:00024**

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Będlewo ★ Geometry and analysis on finite- and infinite-dimensional Lie groups. **2003a:00024**
Birthday:
Procesi, Claudio ★ Special issue in celebration of Claudio Procesi's 60th birthday.
Cohomology of Siegel varieties ★ Cohomology of Siegel varieties.
Colloquium:
Lie Theory and Applications ★ Recent advances in Lie theory. **2003e:00034**
Quantum Groups ★ Quantum groups and integrable systems.
Festschrift:
Roos, Jan-Erik ★ The Roos Festschrift volume. 1.
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17–08 Computational methods

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17Axx General nonassociative rings

17A01 General theory

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17A15 Noncommutative Jordan algebras

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17A20 Flexible algebras

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17A65 Radical theory

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17A70 Superalgebras

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17A75 Composition algebras

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17A80 Valued algebras

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17B05 Structure theory

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17B25 Exceptional (super)algebras

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17B35 Universal enveloping (super)algebras [see also 16S30]

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17B37 Quantum groups (quantized enveloping algebras) and related deformations [see also 16W35, 20G42, 81R50, 82B23]

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17B40 Automorphisms, derivations, other operators

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17B50 Modular Lie (super)algebras

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17B60 Lie (super)algebras associated with other structures (associative, Jordan, etc.) [see also 16W10, 17C40, 17C50]

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Zuber, Jean-Bernard CFT, BCFT, *ADE* and all that. (English summary) **2003k:81215**

17B99 None of the above, but in this section

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Gao, Suo Gang (*with* Zhang, Xin Lu) Ideals of some linear Lie superalgebras over commutative rings. (Chinese. English and Chinese summaries) **2003k:17039**

Gromov, N. A. (*with* Kostykov, I. V.; Kuratov, V. V.) Cayley-Klein contractions of orthosymplectic superalgebras. (English summary) (*see* **2003d:81004**)

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Kostykov, I. V. *see* **Gromov, N. A. et al., (2003d:81004)**

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Kuusk, Piret *see* **Abramov, Viktor, (2003a:00013)**

Okubo, Susumu (*with* Kamiya, Noriaki) Quasi-classical Lie superalgebras and Lie supertriple systems. (English summary) **2003e:17046**

Petravchuk, Anatoliĭ P. On abelian subalgebras of Lie algebras that are not close to ideals. (Ukrainian. English and Ukrainian summaries)
Pusztai, B. G. *see* **Fehér, László, 2003d:17039**
Rausch de Traubenberg, M. (*with* Slupinski, M. J.) Finite-dimensional Lie algebras of order F. (English summary) **2003j:17044**
Slupinski, M. J. *see* **Rausch de Traubenberg, M., 2003j:17044**
Sun, Li Ping Ideals of orthogonal-symplectic Lie superalgebras over commutative rings. (Chinese. English and Chinese summaries)
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Accardi, Luigi (*with* Franz, Uwe[1]; Skeide, Michael) Renormalized squares of white noise and other non-Gaussian noises as Lévy processes on real Lie algebras. (English summary) **2003f:60084**
Acharyya, S. K. (*with* Basu, D. K.) Origin of certain generating functions of modified Legendre polynomials from the view point of Lie-algebra. (English summary)
Basili, Roberta Resolutions of singularities of varieties of Lie algebras of dimensions 3 and 4. (English summary) **2003g:14018**
Basu, D. K. *see* **Acharyya, S. K.**
Breckner, Brigitte E. A note on Lie semialgebras in $\mathfrak{sl}(2,\mathbb{R})$. (English summary) **2003i:22011**
Cardeal, J. A. (*with* Santana, A. E.; Rocha Filho, Tarcísio M.) Symmetry and classes of transport equations. (English summary) **2003c:82080**
Celledoni, Elena (*with* Iserles, Arieh) Methods for the approximation of the matrix exponential in a Lie-algebraic setting. (English summary) **2003a:65055**
Duchamp, Gérard (*with* Laugerotte, É.; Luque, J.-G.) On the support of graph Lie algebras. (English summary) **2003d:68206**
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Fomin, Sergey (*with* Zelevinsky, Andrei) Cluster algebras. I. Foundations. (English summary) **2003f:16050**
Franz, Uwe[1] *see* **Accardi, Luigi et al., 2003f:60084**
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Iglesias, David (*with* Marrero, Juan Carlos) Lie algebroids, Jacobi structures and Lie groups. (English summary) **2003k:53106**
— (*with* Marrero, Juan Carlos) Generalized Lie bialgebroids and strong Jacobi-Nijenhuis structures. **2003j:53127**
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Rocha Filho, Tarcísio M. *see* **Cardeal, J. A. et al., 2003c:82080**
Romero, Juan Luis *see* **Muriel, C., 2003f:34074**
Roytenberg, Dmitry Quasi-Lie bialgebroids and twisted Poisson manifolds. (English summary) **2003j:53130**
Santana, A. E. *see* **Cardeal, J. A. et al., 2003c:82080**
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Skeide, Michael *see* **Accardi, Luigi et al., 2003f:60084**
Zelevinsky, Andrei *see* **Fomin, Sergey, 2003f:16050**

17Cxx Jordan algebras (algebras, triples and pairs)

17C05 Identities and free Jordan structures

Brešar, Matej (*with* Cabrera García, Miguel; Villena Muñoz, Armando R.) Functional identities in Jordan algebras: associating maps. (English summary) **2003h:17041**
Cabrera García, Miguel *see* **Brešar, Matej et al., 2003h:17041**
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Items with secondary classifications in 17C05

Anquela, José A. (*with* Cortés, Teresa; García, Esther) Simplicity of the heart of a nondegenerate Jordan system. (English summary) **2003b:17038**
Cortés, Teresa *see* **Anquela, José A. et al., 2003b:17038**
García, Esther *see* **Anquela, José A. et al., 2003b:17038**

17C10 Structure theory

Anquela, José A. (*with* Cortés, Teresa; García, Esther) Simplicity of the heart of a nondegenerate Jordan system. (English summary) **2003b:17038**
Cortés, Teresa *see* **Anquela, José A. et al., 2003b:17038**
Elgueta A., Luisa (*with* Suazo, Avelino) Jordan nilalgebras of nilindex N and dimension $N+1$. (English summary) **2003j:17045**
— (*with* Suazo, Avelino) The index of nilpotence of Jordan nilalgebras of nilindex N and dimension $N+2$. (English summary) **2003f:17042**
— (*with* Suazo, Avelino) Jordan nilalgebras of dimension 6. (English summary) **2003j:17046**
García, Esther *see* **Anquela, José A. et al., 2003b:17038**
Hall, J. A. Speciality of interconnected quadratic Jordan algebras. (English summary) **2003c:17040**
Suazo, Avelino *see* **Elgueta A., Luisa, 2003f:17042; 2003j:17045** *and* **2003j:17046**

Items with secondary classifications in 17C10

Anquela, José A. (*with* Cortés, Teresa) Peirce gradings of Jordan systems. (English summary) **2003c:17041**
Cabrera García, Miguel Ideals which memorize the extended centroid. (English summary) **2003f:17001**
Cortés, Teresa *see* **Anquela, José A., 2003c:17041**
Koufany, Khalid Contractions of angles in symmetric cones. (English summary) **2003f:32027**

17C20 Simple, semisimple algebras

Tvalavadze, M. V. (*with* Tvalavadze, T. V.) On decompositions of algebras of type $B(f)$ into the sum of simple subalgebras. (Russian. Russian summary) **2003f:17043**
Tvalavadze, T. V. *see* **Tvalavadze, M. V., 2003f:17043**

Items with secondary classifications in 17C20

Anquela, José A. (*with* Cortés, Teresa; García, Esther) Simplicity of the heart of a nondegenerate Jordan system. (English summary) **2003b:17038**
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Kalliterakis, Antonis Estimations à l'infini des fonctions de Bessel associées aux représentations d'une algèbre de Jordan. (English and French summaries) [Estimates at infinity of Bessel functions associated with representations of a Jordan algebra] **2003e:33009**

17C27 Idempotents, Peirce decompositions

Anquela, José A. (*with* Cortés, Teresa) Peirce gradings of Jordan systems. (English summary) **2003c:17041**
Cortés, Teresa *see* **Anquela, José A., 2003c:17041**

Items with secondary classifications in 17C27

Isidro, José María[1] (*with* Mackey, Michael T.) The manifold of finite rank projections in the algebra $\mathscr{L}(H)$ of bounded linear operators. (English summary) **2003b:58007**
Mackey, Michael T. *see* **Isidro, José María[1], 2003b:58007**

17C30 Associated groups, automorphisms

Items with secondary classifications in 17C30

Pevzner, Michel Analyse conforme sur les algèbres de Jordan. (English summary) [Conformal analysis on Jordan algebras] **2003j:22016**

17C36 Associated manifolds

Bertram, Wolfgang Symmetric spaces with Jordan structures. (English summary) **2003f:17044**

17C37 Associated geometries

Bertram, Wolfgang (*with* Hilgert, Joachim) Geometry of symmetric spaces via Jordan structures. (English and Romanian summaries) **2003m:17028**
Hilgert, Joachim *see* **Bertram, Wolfgang, 2003m:17028**

Items with secondary classifications in 17C37

Bae, Heekyung (*with* Lim, Yongdo) Parallel addition and fixed points of compressions on symmetric cones. (English summary) **2003k:53056**
De Mari, Filippo (*with* Nowak, Krzysztof) Localization type Berezin-Toeplitz operators on bounded symmetric domains. (English summary) **2003b:47048**
Lim, Yongdo *see* **Bae, Heekyung, 2003k:53056**
Nowak, Krzysztof *see* **De Mari, Filippo, 2003b:47048**

17C40 Exceptional Jordan structures

Bjerregaard, Pablo Alberca (*with* Martín González, Cándido) Matrix of an element of $f_4(O_s)$. (English summary) (*see* **2003h:17002**)
Martín González, Cándido *see* **Bjerregaard, Pablo Alberca, (2003h:17002)**

Items with secondary classifications in 17C40

Baez, John C. The octonions. (English summary) **2003f:17003**
Petersson, Holger P. (*with* Racine, Michel L.) Octonion algebras obtained from associative algebras with involution. (English summary) **2003a:17004**
Racine, Michel L. *see* **Petersson, Holger P., 2003a:17004**

17C50 Jordan structures associated with other structures [see also 16W10]

Grunenfelder, L. (*with* Košir, Tomaž; Omladič, Matjaž; Radjavi, Heydar) Maximal Jordan algebras of matrices with bounded number of eigenvalues. (English summary) **2003c:17042**

Kamiya, Noriaki (*with* Okubo, Susumu) A construction of simple Jordan superalgebra of F type from a Jordan-Lie triple system. (English summary) **2003j:17047**

Košir, Tomaž *see* **Grunenfelder, L. et al., 2003c:17042**

Okubo, Susumu *see* **Kamiya, Noriaki, 2003j:17047**

Omladič, Matjaž *see* **Grunenfelder, L. et al., 2003c:17042**

Radjavi, Heydar *see* **Grunenfelder, L. et al., 2003c:17042**

Items with secondary classifications in 17C50

Bertram, Wolfgang Generalized projective geometries: general theory and equivalence with Jordan structures. (English summary) **2003j:51001**

Neeb, Karl-Hermann (*with* Ørsted, Bent) Representation in L^2-spaces on infinite-dimensional symmetric cones. (English summary) **2003k:22029**

Neher, Erhard (*with* Yoshii, Yoji) Derivations and invariant forms of Jordan and alternative tori. (English summary) **2003i:16052**

Ørsted, Bent *see* **Neeb, Karl-Hermann, 2003k:22029**

Yoshii, Yoji *see* **Neher, Erhard, 2003i:16052**

17C65 Jordan structures on Banach spaces and algebras [see also 46H70, 46L70]

Items with secondary classifications in 17C65

Aupetit, Bernard (*with* Maouche, Abdelaziz) Trace and determinant in Jordan-Banach algebras. (English summary) **2003e:46079**

Bae, Heekyung (*with* Lim, Yongdo) On some Finsler structures of symmetric cones. (English summary) **2003m:32019**

Bunce, Leslie J. (*with* Peralta, Antonio M.) Images of contractive projections on operator algebras. (English summary) **2003j:46108**

– (*with* Sheppard, B.) Weak limits of the extreme dual ball in JB*-triples. (English summary) **2003f:46112**

Hessenberger, Gerald (*with* Maouche, Abdelaziz) On Banach Jordan systems with at most two spectral values. (English summary) **2003k:46071**

Lim, Yongdo *see* **Bae, Heekyung, 2003m:32019**

Lu, Fang-yan Jordan isomorphisms of nest algebras. (English summary) **2003f:47121**

Maouche, Abdelaziz *see* **Aupetit, Bernard, 2003e:46079** *and* **Hessenberger, Gerald, 2003k:46071**

Neal, Matthew Spectrum preserving linear maps on JBW*-triples. (English summary) **2003j:47047**

Peralta, Antonio M. *see* **Bunce, Leslie J., 2003j:46108**

Sheppard, B. *see* **Bunce, Leslie J., 2003f:46112**

Villena Muñoz, Armando R. Automatic continuity in associative and nonassociative context. (English summary) **2003a:46074**

17C70 Super structures

Martínez López, Consuelo (*with* Zelmanov, Efim) Specializations of Jordan superalgebras. (English and Spanish summaries) **2003c:17043**

– (*with* Zelmanov, Efim) Specializations of Jordan superalgebras. (English summary) **2003k:17040**

– (*with* Zelmanov, Efim) A Kronecker factorization theorem for the exceptional Jordan superalgebra. (English summary) **2003k:17041**

Zelmanov, Efim *see* **Martínez López, Consuelo, 2003c:17043; 2003k:17040** *and* **2003k:17041**

Zhelyabin, V. N. Simple special Jordan superalgebras with an associative nil-semisimple even part. (Russian. Russian summary) **2003j:17048**

Items with secondary classifications in 17C70

López-Díaz, M. C. (*with* Shestakov, Ivan P.) Representations of exceptional simple alternative superalgebras of characteristic 3. (English summary) **2003b:17039**

Shestakov, Ivan P. *see* **López-Díaz, M. C., 2003b:17039**

Trushina, M. N. Indecomposable representations of the superalgebra $B(1,2)$. (Russian. Russian summary) **2003h:17042**

17C90 Applications to physics

Items with secondary classifications in 17C90

Friedman, Yaakov (*with* Russo, Bernard) A new approach to spinors and some representations of the Lorentz group on them. (English summary) **2003a:81083**

– (*with* Gofman, Yuriy) Why does the geometric product simplify the equations of physics? (English summary) **2003i:83003**

Gofman, Yuriy *see* **Friedman, Yaakov, 2003i:83003**

Niestegge, Gerd Non-Boolean probabilities and quantum measurement. (English summary) **2003i:81008**

Russo, Bernard *see* **Friedman, Yaakov, 2003a:81083**

17C99 None of the above, but in this section

Asadurian, Eduard (*with* Ştefănescu, Mirela) A pair of Jordan triple systems of Jordan pair type. (English summary) **2003m:17029**

Ştefănescu, Mirela *see* **Asadurian, Eduard, 2003m:17029**

Items with secondary classifications in 17C99

Bae, Heekyung (*with* Lim, Yongdo) Parallel addition and fixed points of compressions on symmetric cones. (English summary) **2003k:53056**

Barchini, L. (*with* Ben Saïd, Salem) Hypergeometric functions associated to cones of convex type in a Euclidean Jordan algebra. (English summary) **2003i:33017**

Ben Saïd, Salem *see* **Barchini, L., 2003i:33017**

Lim, Yongdo *see* **Bae, Heekyung, 2003k:53056**

17Dxx Other nonassociative rings and algebras

17D05 Alternative rings

Badeev, A. V. The variety $\mathfrak{N}_3\mathfrak{N}_2$ of commutative alternative nil-algebras of index 3 over a field of characteristic 3. (Russian. English and Russian summaries) **2003i:17030**

Krutelevich, Sergei On a canonical form of a 3×3 Hermitian matrix over the ring of integral split octonions. (English summary) **2003g:17044**

López-Díaz, M. C. (*with* Shestakov, Ivan P.) Representations of exceptional simple alternative superalgebras of characteristic 3. (English summary) **2003b:17039**

Oneto, Angel Alternative real division algebras of finite dimension. (English and Spanish summaries) **2003m:17030**

Pchelintsev, S. V. The structure of weak identities on the Grassmannian envelopes of centrally metabelian alternative superalgebras of superrank 1 over a field of characteristic 3. (Russian. English and Russian summaries) **2003b:17040**

Shestakov, Ivan P. *see* **López-Díaz, M. C., 2003b:17039**

Trushina, M. N. Irreducible alternative superbimodules over the simple alternative superalgebra $B(1,2)$. (Russian. English and Russian summaries) **2003g:17045**

– Indecomposable representations of the superalgebra $B(1,2)$. (Russian. Russian summary) **2003h:17042**

Yoshii, Yoji Classification of division $\mathbb{Z}^n$-graded alternative algebras. (English summary) **2003k:17042**

Items with secondary classifications in 17D05

Bremner, Murray (*with* Hentzel, Irvin Roy) Identities for the associator in alternative algebras. (English summary) **2003b:17002**

Cabrera García, Miguel Ideals which memorize the extended centroid. (English summary) **2003f:17001**

Cuenca Mira, José Antonio On division algebras satisfying Moufang identities. (English summary) **2003h:17005**

Goodaire, Edgar G. (*with* Polcino Milies, César) Moufang unit loops torsion over their centres. (English summary) **2003f:20112**

Hentzel, Irvin Roy *see* **Bremner, Murray, 2003b:17002**

Nagy, Gábor P. On nilpotent loop rings and a problem of Goodaire. (English summary) **2003m:20098**

Neher, Erhard (*with* Yoshii, Yoji) Derivations and invariant forms of Jordan and alternative tori. (English summary) **2003i:16052**

Petersson, Holger P. The structure group of an alternative algebra. (English summary) **2003j:17004**

Polcino Milies, César *see* **Goodaire, Edgar G., 2003f:20112**

Yoshii, Yoji *see* **Neher, Erhard, 2003i:16052**

17D10 Mal′cev (Mal′tsev) rings and algebras

Feng, Jian-qiang Nilpotent ideals in Malcev algebras. (English and Chinese summaries)

Items with secondary classifications in 17D10

Kharitonov, D. Yu. *see* **Koreshkov, N. A., 2003c:17003**

Koreshkov, N. A. (*with* Kharitonov, D. Yu.) On the nilpotency of Engel algebras. (Russian) **2003c:17003**

17D15 Right alternative rings

Pchelintsev, S. V. On central ideals of finitely generated binary $(-1,1)$-algebras. (Russian. Russian summary) **2003f:17045**

Suvarna, K. (*with* Vijaya, R. Bhuvana) Simple right alternative rings with $(xy)z = (xz)y$. (English summary)

Vijaya, R. Bhuvana *see* **Suvarna, K.**

17D25 Lie-admissible algebras

Mizuhara, Akira Simple left symmetric algebras over a reductive Lie algebra. (English summary) **2003c:17044**

– On simple left symmetric algebras over a solvable Lie algebra. (English summary) **2003m:17031**

Remm, Elisabeth Opérades Lie-admissibles. (English and French summaries) [Lie-admissible operads] **2003d:17040**

17D92 Genetic algebras

Bayara, J. (*with* Quattara, M.; Micali, A.; da Motta Ferreira, João Carlos) Sur une classe d'algèbres d'évolution. (English summary) [A class of evolution algebras] **2003j:17049**

Burgueño, C. *see* **Mallol, Cristián, 2003e:17047**

Conseibo, A. (*with* Quattara, M.) Sur les sous-algèbres monogènes d'algèbres d'évolution stationnaire. (English summary) [Monogenic subalgebras of stationary evolution algebras] **2003m:17032**

Costa, Roberto C. F. (*with* Suazo, Avelino) The multiplication algebra of weighted algebras of degree 4. (English summary) **2003h:17043**

– (*with* Ikemoto Murakami, L. S.) Some properties of the automorphisms of a Bernstein algebra. (English summary) **2003b:17041**

Guzzo, H., Jr. (*with* Vicente, P.) Derivatives in nth-order Bernstein algebras. II. (English summary) **2003k:17043**

– (*with* Vicente, P.) The bar-radical in power-associative nth-order Bernstein algebras. (English summary) **2003d:17041**

— Some properties of bar-radical of baric algebras. (English summary) **2003i:17031**
— (*with* Vicente, P.) Derivations in nth-order Bernstein algebras. (English summary) **2003d:17042**
Ikemoto Murakami, L. S. *see* **Costa, Roberto C. F., 2003b:17041**
Mallol, Cristián (*with* Burgueño, C.) Algèbres ω-monomiales associatives non commutatives. (French summary) [Noncommutative associative ω-monomial algebras] **2003e:17047**
— Sur quelques train algèbres associatives non commutatives. (French summary) [Some noncommutative associative train algebras] **2003i:17032**
Micali, A. *see* **Bayara, J. et al., 2003j:17049**
da Motta Ferreira, João Carlos *see* **Bayara, J. et al., 2003j:17049**
Quattara, M. *see* **Bayara, J. et al., 2003j:17049** *and* **Conseibo, A., 2003m:17032**
Setó, J. On the lattice of ideals of a Bernstein algebra. (English summary) **2003f:17046**
Suazo, Avelino *see* **Costa, Roberto C. F., 2003h:17043**
Vicente, P. *see* **Guzzo, H., Jr., 2003d:17041**; **2003d:17042** *and* **2003k:17043**
Zitan, F. Some results on baric algebras. (English summary) **2003c:17045**

Items with secondary classifications in 17D92

Boujemaa, H. (*with* Rachidi, Mustapha; Micali, A.) On a class of nonassociative algebras: a reduction theorem for their associated quadratic systems. (English summary) **2003d:17043**
Labra, Alicia (*with* Reyes, Cristian) On polynomial identities on train algebras of rank 3. (English summary) **2003e:17002**
Micali, A. *see* **Boujemaa, H. et al., 2003d:17043**
Rachidi, Mustapha *see* **Boujemaa, H. et al., 2003d:17043**
Reyes, Cristian *see* **Labra, Alicia, 2003e:17002**

17D99 None of the above, but in this section

Boujemaa, H. (*with* Rachidi, Mustapha; Micali, A.) On a class of nonassociative algebras: a reduction theorem for their associated quadratic systems. (English summary) **2003d:17043**
Micali, A. *see* **Boujemaa, H. et al., 2003d:17043**
Rachidi, Mustapha *see* **Boujemaa, H. et al., 2003d:17043**

Items with secondary classifications in 17D99

Curado, E. M. F. (*with* Rego-Monteiro, M. A.) Non-linear generalization of the sl(2) algebra. (English summary) **2003g:81073**
Rego-Monteiro, M. A. *see* **Curado, E. M. F., 2003g:81073**

18–XX Category theory; homological algebra {For commutative rings see 13Dxx, for associative rings 16Exx, for groups 20Jxx, for topological groups and related structures 57Txx; see also 55Nxx and 55Uxx for algebraic topology.}

18–01 Instructional exposition (textbooks, tutorial papers, etc.)

Items with secondary classifications in 18–01

Cohn, P. M. ★ Further algebra and applications. **2003k:00001**
— ★ Basic algebra. **2003m:00001**
Lavendhomme, René ★ Lieux du sujet. (French. French summary) [Places of the subject] **2003a:00003**

18–02 Research exposition (monographs, survey articles)

Gelfand, Sergei I. (*with* Manin, Yuriĭ Ivanovich) ★ Methods of homological algebra. **2003m:18001**
Manin, Yuriĭ Ivanovich *see* **Gelfand, Sergei I., 2003m:18001**

Items with secondary classifications in 18–02

Johnstone, Peter T. ★ Sketches of an elephant: a topos theory compendium. Vol. 1. **2003k:18005**

18–03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 18–03

Johnstone, Peter T. Elements of the history of locale theory. **2003d:01026**
Krömer, Ralf Tarski's axiom of inaccessibles and Grothendieck universes—historical and critical remarks on the foundations of category theory. (English summary) **2003i:03003**

18–04 Explicit machine computation and programs (not the theory of computation or programming)

Alp, Murat Enumeration of Whitehead groups of low order. (English summary) **2003j:18001**

18–06 Proceedings, conferences, collections, etc.

Items with secondary classifications in 18–06

(Adámek, Jiří) *see* **Category theory and computer science**
(Carboni, Aurelio) *see* **Special Issue: Celebrating the 70th birthday of Professor Max Kelly**
(Escardó, Martín H.) *see* **Category theory and computer science**
(Hofmann, Martin) *see* **Category theory and computer science**
(Janelidze, George) *see* **Special Issue: Celebrating the 70th birthday of Professor Max Kelly**
(Kelly, Gregory Maxwell) *see* **Special Issue: Celebrating the 70th birthday of Professor Max Kelly**
(Radford, David E.) *see* **Diagrammatic morphisms and applications, 2003k:57002**
(Souza, Fernando J. O.) *see* **Diagrammatic morphisms and applications, 2003k:57002**
(Street, Ross H.) *see* **Special Issue: Celebrating the 70th birthday of Professor Max Kelly**
(Yetter, David N.) *see* **Diagrammatic morphisms and applications, 2003k:57002**

Items listed otherwise than by author

Category theory and computer science ★ Category theory and computer science.
Contemporary Mathematics ★ Diagrammatic morphisms and applications. **2003k:57002**
Diagrammatic morphisms and applications ★ Diagrammatic morphisms and applications. **2003k:57002**
Festschrift:
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18Axx General theory of categories and functors

18A05 Definitions, generalizations

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18A15 Foundations, relations to logic and deductive systems [see also 03–XX]

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18A20 Epimorphisms, monomorphisms, special classes of morphisms, null morphisms

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18A22 Special properties of functors (faithful, full, etc.)

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18A25 Functor categories, comma categories

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18A30 Limits and colimits (products, sums, directed limits, pushouts, fiber products, equalizers, kernels, ends and coends, etc.)

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18A32 Factorization of morphisms, substructures, quotient structures, congruences, amalgams

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18A35 Categories admitting limits (complete categories), functors preserving limits, completions

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18A40 Adjoint functors (universal constructions, reflective subcategories, Kan extensions, etc.)

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18Bxx Special categories

18B05 Category of sets, characterizations [see also 03–XX]

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18B10 Category of relations, additive relations

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18B15 Embedding theorems, universal categories [see also 18E20]

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18B20 Categories of machines, automata, operative categories [see also 03D05, 68Qxx]

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18B25 Topoi [see also 03G30]

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18B30 Categories of topological spaces and continuous mappings [see also 54–XX]

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Luo, Mao Kang *see* **Li, Sanjiang**
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Mynard, Frédéric Coreflectively modified continuous duality applied to classical product theorems. (English summary) **2003c:54022**
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Nusser, Harald A generalization of probabilistic uniform spaces. (English summary) **2003c:54062**
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Plewe, Till Sublocale lattices. (English summary) **2003c:54048**
— *see also* **He, Wei[1], 2003d:54022**
Richter, Günther (*with* Tholen, Walter) Perfect maps are exponentiable—categorically. (English summary) **2003e:18002**
Robu, Rodica *see* **Botnaru, D. V., (2003g:00027)**
Sioen, Mark Symmetric monoidal closed structures in PRAP. (French summary) **2003f:54003**
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Sousa, Lurdes Pushout stability of embeddings, injectivity and categories of algebras. (*see* **2003b:00027**)
Taylor, Paul Sober spaces and continuations. (English summary) **2003g:54003**
— Subspaces in abstract Stone duality. (English summary) **2003g:54021**
Tholen, Walter *see* **Richter, Günther, 2003e:18002** *and* **Clementino, Maria Manuel, 2003f:54022**
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Windels, Bart Precompactness and total boundedness in products of metric spaces. (English summary) **2003b:54031**
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— On the relationship between several basic categories in fuzzy topology. (English summary) **2003h:54008**
— *see also* **Liu, Ying Ming, 2003c:54015**

18B35 Preorders, orders and lattices (viewed as categories) [see also 06–XX]

Bunge, Marta (*with* Funk, Jonathon Randall; Jibladze, Mamuka; Streicher, Thomas) The Michael completion of a topos spread. (English summary) **2003j:18006**
Coecke, Bob (*with* Moore, David Jeffrey) Operational Galois adjunctions. **2003d:18007**
Funk, Jonathon Randall *see* **Bunge, Marta et al., 2003j:18006**
Jibladze, Mamuka *see* **Bunge, Marta et al., 2003j:18006**
Moore, David Jeffrey *see* **Coecke, Bob, 2003d:18007**
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Bondarenko, V. M. Representations with degeneracy conditions of weakly completed partially ordered sets: the categories $\overline{R}_k(S \amalg T)$ of finite type. (Russian. English and Ukrainian summaries) **2003f:16023**
Fiore, Marcelo P. (*with* Rosolini, Giuseppe) Domains in $\mathscr{H}$. (English summary) **2003f:68082**
Herrlich, Horst *see* **Adámek, Jiřiet al., 2003i:18001**
Nešetřil, Jaroslav (*with* Tardif, Claude) Density via duality. (English summary) **2003h:05084**
Rosický, Jiří *see* **Adámek, Jiřiet al., 2003i:18001**
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Tardif, Claude *see* **Nešetřil, Jaroslav, 2003h:05084**
Tholen, Walter *see* **Adámek, Jiřiet al., 2003i:18001**

18B40 Groupoids, semigroupoids, semigroups, groups (viewed as categories) [see also 20Axx, 20L05, 20Mxx]

Items with secondary classifications in 18B40

Gran, Marino Commutators and central extensions in universal algebra. (English summary) **2003f:08012**
Grandis, Marco (*with* Vitale, Enrico M.) A higher dimensional homotopy sequence. (English summary) **2003h:18019**
Ionescu, Lucian M. Categorification and group extensions. (English summary) **2003c:18007**
Ivan, Gheorghe Special morphisms of groupoids. (English summary) **2003m:20074**
Kou, Hui (*with* Luo, Mao Kang) Adjunctions between the category of quasicontinuous domain and its subcategories. (Chinese. English and Chinese summaries) **2003i:54003**
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18B99 None of the above, but in this section

Gómez Perdomo, Jonatan Closure operators on O-categories. (Spanish. English and Spanish summaries) **2003d:18008**
Hager, Anthony W. (*with* Martinez, Jorge[2]) Functorial rings of quotients. III. The maximum in Archimedean f-rings. (English summary) **2003a:18002**
Madanshekaf, A. An isomorphism in a category with a ring object. (English summary) **2003i:18005**
Martinez, Jorge[2] *see* **Hager, Anthony W., 2003a:18002**
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Pham Quang Trinh *see* **Nguyễn Nhụy, 2003m:18006**
Stefani, S. T. An algebraic approach to categories of partial morphisms. (English summary) **2003a:18003**

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Cattani, Gian Luca *see* **Fiore, Marcelo P. et al., (2003f:68004)**
Dvurečenskij, Anatolij Product effect algebras. (English summary) **2003j:81005**
Fiore, Marcelo P. (*with* Cattani, Gian Luca; Winskel, Glynn) Weak bisimulation and open maps (extended abstract). (English summary) (*see* **2003f:68004**)
Frič, Roman Convergence and duality. (English summary) **2003h:60005**
— Łukasiewicz tribes are absolutely sequentially closed bold algebras. (English summary) **2003i:28022**
Goldblatt, Robert Duality for some categories of coalgebras. (English summary) **2003g:03049**
Janelidze, George (*with* Márki, László; Tholen, Walter) Semi-abelian categories. (English summary) **2003d:18020**
Kawahara, Yasuo *see* **Okuma, Hitomi et al., 2003h:68030**
Kennison, John F. The cyclic spectrum of a Boolean flow. (English summary) **2003f:37032**
Khorashadi-Zadeh, M. R. (*with* Zahedi, Mohammad Mehdi) L_t-fuzzy graph and hypergraph. (English summary) **2003d:05150**
Lastaria, Federico G. On the category-theoretic approach to differential geometry. (English summary) **2003d:58001**
Li, HaiMing (*with* Qin, Ke Yun; Xu, Yang[1]) L-fuzzy set categories based on generalized extension principle. (English summary) **2003g:03089**
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Mao, Xu Xin (*with* Xu, Luo Shan) Representation theorem of algebraic L-domains and some properties of relevant categories. (Chinese. English and Chinese summaries)
Márki, László *see* **Janelidze, George et al., 2003d:18020**
Mazzola, Guerino The topos geometry of musical logic. (English summary)
Okuma, Hitomi (*with* MacCaull, Wendy; Kawahara, Yasuo) Informational representability for contexts in Dedekind categories. (English summary) **2003h:68030**
Qin, Ke Yun *see* **Li, HaiMing et al., 2003g:03089**
Resende, Pedro Tropological systems are points of quantales. (English summary) **2003f:46113**
Röhrl, Helmut The category $Cv_{D_0,N}$-Cmod and MP. (English summary) **2003e:16063**
Romanowska, Anna B. (*with* Smith, Jonathan D. H.) ★ Modes. (English summary) **2003i:08001**
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Suciu, Elena Alina Projectivity in categories of Hilbert modules over function algebras. (English summary) **2003a:46072**
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Xu, Yang[1] *see* **Li, HaiMing et al., 2003g:03089**
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18Cxx Categories and theories

18C05 Equational categories [see also 03C05, 08C05]

Items with secondary classifications in 18C05

Bourn, Dominique (*with* Gran, Marino) Centrality and connectors in Maltsev categories. (English summary) **2003m:08011**
Fiorentini, Camillo (*with* Ghilardi, Silvio) Combining word problems through rewriting in categories with products. (English summary) **2003m:03065**
Ghilardi, Silvio *see* **Fiorentini, Camillo, 2003m:03065**
Gran, Marino *see* **Bourn, Dominique, 2003m:08011**

18C10 Theories (e.g. algebraic theories), structure, and semantics [see also 03G30]

Adámek, Jiří Final coalgebras are ideal completions of initial algebras. (English summary) **2003e:18006**
Centazzo, C. (*with* Vitale, Enrico M.) A duality relative to a limit doctrine. (English summary) **2003k:18007**
Pavlović, Duško (*with* Pratt, Vaughan R.) The continuum as a final coalgebra. (English summary) **2003e:18007**
Petrić, Zoran Coherence in substructural categories. (English summary) **2003a:18004**
Pratt, Vaughan R. *see* **Pavlović, Duško, 2003e:18007**
Vitale, Enrico M. *see* **Centazzo, C., 2003k:18007**

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Aczel, Peter Algebras and coalgebras.
Benson, D. B. (*with* Nečesal, M.; Rosický, Jiří) Algebras over variable theories. (English summary) **2003i:08008**
Corradini, Andrea (*with* Heckel, Reiko; Montanari, Ugo) Compositional SOS and beyond: a coalgebraic view of open systems. (English summary) **2003e:68094**
Dezani-Ciancaglini, Mariangiola (*with* Honsell, Furio; Motohama, Yoko) Approximation theorems for intersection type systems. (English summary) **2003d:03016**
Diaconescu, Răzvan Grothendieck institutions. (English summary) **2003h:18004**
Diers, Yves Topological geometrical categories. (English summary) **2003e:18005**
Heckel, Reiko *see* **Corradini, Andrea et al., 2003e:68094**
Hennicker, Rolf *see* **Kurz, Alexander, 2003d:68177**
Honsell, Furio *see* **Dezani-Ciancaglini, Mariangiola et al., 2003d:03016**
Jibladze, Mamuka (*with* Pirashvili, Teimuraz) On Kan fibrations for Maltsev algebras. (English summary) **2003f:55026**
Kurz, Alexander (*with* Hennicker, Rolf) On institutions for modular coalgebraic specifications. (English summary) **2003d:68177**
Lasota, Sławomir Coalgebra morphisms subsume open maps. (English summary) **2003h:68097**
Markl, Martin (*with* Shnider, Steve) Coherence constraints for operads, categories and algebras. (English summary) **2003b:18006**

Montanari, Ugo *see* **Corradini, Andrea et al., 2003e:68094**
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Noilhan, Fabrice (*with* Santha, Miklos) Semantical counting circuits. (English summary) **2003m:68045**
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Pitts, Andrew M. Tripos theory in retrospect. (English summary) **2003g:03110**
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Wolter, Uwe CSP, partial automata, and coalgebras. (English summary) **2003d:68195**
Yanofsky, Noson S. Coherence, homotopy and 2-theories. (English summary) **2003d:18014**

18C15 Triples (= standard construction, monad or triad), algebras for a triple, homology and derived functors for triples [see also 18Gxx]

Carrasco, Pilar (*with* Cegarra, Antonio M.; R.-Grandjeán L.-Valcárcel, Alfredo) (Co)homology of crossed modules. (English summary) **2003c:18004**
Cegarra, Antonio M. *see* **Carrasco, Pilar et al., 2003c:18004**
Grandis, Marco On the monad of proper factorisation systems in categories. (English summary) **2003e:18008**
Lack, Stephen Codescent objects and coherence. (English summary) **2003k:18008**
Le Creurer, I. J. (*with* Marmolejo, F.; Vitale, Enrico M.) Beck's theorem for pseudo-monads. (English summary) **2003f:18004**
Marmolejo, F. *see* **Le Creurer, I. J. et al., 2003f:18004**
Power, John (*with* Watanabe, Hiroshi[6]) Combining a monad and a comonad. (English summary) **2003g:18002**
Radul, Taras Categorical properties of iterated power. (English summary) **2003c:18005**
R.-Grandjeán L.-Valcárcel, Alfredo *see* **Carrasco, Pilar et al., 2003c:18004**
Vitale, Enrico M. *see* **Le Creurer, I. J. et al., 2003f:18004**
Watanabe, Hiroshi[6] *see* **Power, John, 2003g:18002**

Items with secondary classifications in 18C15

Erkök, Levent (*with* Launchbury, John; Moran, Andrew) Semantics of value recursion for monadic input/output. (English summary) **2003m:68019**
Gregoriou, John A categorical approach to integral of measures and disintegration of measures. (English summary) **2003b:28004**
Lack, Stephen (*with* Street, Ross H.) The formal theory of monads. II. (English summary) **2003m:18007**
Launchbury, John *see* **Erkök, Levent et al., 2003m:68019**
Moran, Andrew *see* **Erkök, Levent et al., 2003m:68019**
Nailana, Koena Rufus The monad induced by the hom-functor in the category of topological spaces and its associated Eilenberg-Moore algebras. (English summary) **2003k:54004**
Rosebrugh, Robert (*with* Wood, Richard James) Distributive laws and factorization. (English summary) **2003i:18008**
Schröder, Lutz Monads on composition graphs. (English summary) **2003f:18001**
Street, Ross H. *see* **Lack, Stephen, 2003m:18007**
Wood, Richard James *see* **Rosebrugh, Robert, 2003i:18008**

18C20 Algebras and Kleisli categories associated with monads

Batanin, M. A. On the Penon method of weakening algebraic structures. (English summary) **2003g:18003**
Giuli, E. (*with* Hardie, Keith A.; Vermeulen, J. J. C.) The Kleisli category is a category of fractions. (English summary) **2003k:18009**
Hardie, Keith A. *see* **Giuli, E. et al., 2003k:18009**
Lack, Stephen (*with* Street, Ross H.) The formal theory of monads. II. (English summary) **2003m:18007**
Mulry, P. S. Lifting results for categories of algebras. (English summary) **2003d:18009**
Street, Ross H. *see* **Lack, Stephen, 2003m:18007**
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Gregoriou, John A categorical approach to integral of measures and disintegration of measures. (English summary) **2003b:28004**
Lack, Stephen Codescent objects and coherence. (English summary) **2003k:18008**
Schröder, Lutz Monads on composition graphs. (English summary) **2003f:18001**
Voutsadakis, George Categorical abstract algebraic logic: algebraizable institutions. (English summary) **2003h:03106**

18C30 Sketches and generalizations

Items with secondary classifications in 18C30

Adámek, Jiří (*with* Borceux, Francis; Lack, Stephen; Rosický, Jiří) A classification of accessible categories. (English summary) **2003i:18006**
Borceux, Francis *see* **Adámek, Jiřiet al., 2003i:18006**
Hofmann, Dirk A generalization of the duality compactness theorem. (English summary) **2003e:18003**
Lack, Stephen *see* **Adámek, Jiřiet al., 2003i:18006**
Rosický, Jiří *see* **Adámek, Jiřiet al., 2003i:18006**

18C35 Accessible and locally presentable categories

Adámek, Jiří (*with* Borceux, Francis; Lack, Stephen; Rosický, Jiří) A classification of accessible categories. (English summary) **2003i:18006**
— *see also* **Rosický, Jiřiet al., 2003c:18006**
Ageron, Pierre Sur les catégories accessibles multicomplètes. (English summary) [On multicomplete accessible categories] **2003b:18002**
Borceux, Francis *see* **Rosický, Jiřiet al., 2003c:18006** *and* **Adámek, Jiřiet al., 2003i:18006**
Karazeris, Panagis Categorical domain theory: Scott topology, powercategories, coherent categories. (English summary) **2003g:18004**
Lack, Stephen *see* **Adámek, Jiřiet al., 2003i:18006**
Rosický, Jiří Injectivity and accessible categories. (English summary) **2003i:18007**
— (*with* Adámek, Jiří; Borceux, Francis) More on injectivity in locally presentable categories. (English summary) **2003c:18006**
— *see also* **Adámek, Jiřiet al., 2003i:18006**

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Casacuberta, Carles (*with* Scevenels, Dirk) On the existence of group localizations under large-cardinal axioms. (English and Spanish summaries) **2003c:20066**
Centazzo, C. (*with* Vitale, Enrico M.) A duality relative to a limit doctrine. (English summary) **2003k:18007**
Hofmann, Dirk A generalization of the duality compactness theorem. (English summary) **2003e:18003**
Scevenels, Dirk *see* **Casacuberta, Carles, 2003c:20066**
Vitale, Enrico M. *see* **Centazzo, C., 2003k:18007**

18C50 Categorical semantics of formal languages [see also 68Q55, 68Q65]

Cáccamo, Mario (*with* Winskel, Glynn) A higher-order calculus for categories. (English summary) **2003g:18005**
Corradini, Andrea (*with* Gadducci, Fabio) A functorial semantics for multi-algebras and partial algebras, with applications to syntax. (English summary) **2003j:18007**
Diaconescu, Răzvan Grothendieck institutions. (English summary) **2003h:18004**
Gadducci, Fabio *see* **Corradini, Andrea, 2003j:18007**
Manes, Ernest G. Taut monads and $T0$-spaces. **2003j:18008**
Winskel, Glynn *see* **Cáccamo, Mario, 2003g:18005**

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Abramsky, Samson (*with* Jagadeesan, Radha; Malacaria, Pasquale) Full abstraction for PCF. (English summary) **2003c:68044b**
Backhouse, Roland Galois connections and fixed point calculus. (English summary)
Bauer, Andrej A relationship between equilogical spaces and type two effectivity. (English summary) **2003k:68068**
Belala, F. (*with* Bettaz, Mohamed) A natural semantic framework for ECATNets. (English summary) **2003j:68081**
Bettaz, Mohamed *see* **Belala, F., 2003j:68081**
Chen, Yi Xiang *see* **Zhang, Guo-Qiang, 2003i:68083**
Danos, Vincent (*with* Harmer, Russell S.) Probabilistic game semantics. (English summary) **2003e:68078**
Fiore, Marcelo P. (*with* Moggi, E.; Sangiorgi, Davide) A fully abstract model for the π-calculus. (English summary) **2003j:68097**
Freyd, Peter Cartesian logic. **2003e:03124**
Gibbons, Jeremy Calculating functional programs. (English summary)
— *see also* **Martin, Clare, 2003i:68091**
Gumm, H. Peter (*with* Schröder, Tobias) Coalgebras of bounded type. (English summary) **2003i:68081**
Harmer, Russell S. *see* **Danos, Vincent, 2003e:68078**
Hasegawa, Ryu Two applications of analytic functors. (English summary) **2003k:68084**
Hofmann, Martin (*with* Streicher, Thomas) Completeness of continuation models for λ_μ-calculus. (English summary) **2003j:68029**
Jacobs, Bart Exercises in coalgebraic specification. (English summary)
Jagadeesan, Radha *see* **Abramsky, Samson et al., 2003c:68044b**
Malacaria, Pasquale *see* **Abramsky, Samson et al., 2003c:68044b**
Martin, Clare (*with* Gibbons, Jeremy) On the semantics of nested datatypes. **2003i:68091**
Moggi, E. *see* **Fiore, Marcelo P. et al., 2003j:68097**
Plotkin, Gordon *see* **Simpson, Alex K., (2003j:68004)**
Roşu, Grigore Axiomatizability in inclusive equational logics. (English summary) **2003h:03105**
Sangiorgi, Davide *see* **Fiore, Marcelo P. et al., 2003j:68097**
Schröder, Tobias *see* **Gumm, H. Peter, 2003i:68081**
Simpson, Alex K. (*with* Plotkin, Gordon) Complete axioms for categorical fixed-point operators. (English summary) (*see* **2003j:68004**)
Streicher, Thomas *see* **Hofmann, Martin, 2003j:68029**
Syropoulos, Apostolos Algebraic structures are labeled transition systems! (English summary) **2003k:68083**
Zhang, Guo-Qiang (*with* Chen, Yi Xiang) Domains via graphs. (English summary) **2003i:68083**

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Robinson, Edmund (*with* Rosolini, Giuseppe) An abstract look at the realizability. (English summary) **2003e:18009**
Rosolini, Giuseppe *see* **Robinson, Edmund, 2003e:18009**

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Moss, Lawrence S. Parametric corecursion. (English summary) **2003b:03039**
Pfalzgraf, Jochen[2] Modeling connectionist network structures: some geometric and categorical aspects. (English summary) **2003m:68110**
Zafiris, Elias On quantum event structures. I. The categorical scheme. (English summary) **2003a:81008a**
— On quantum event structures. II. Interpretational aspects. (English summary) **2003a:81008b**

18Dxx Categories with structure

18D05 Double categories, 2-categories, bicategories and generalizations

Al-Agl, Fahd Ali (*with* Brown, Ronald; Steiner, Richard) Multiple categories: the equivalence of a globular and a cubical approach. (English summary) **2003g:18006**
Berger, Clemens A cellular nerve for higher categories. (English summary) **2003g:18007**
Bourn, Dominique Aspherical abelian groupoids and their directions. (English summary) **2003a:18005**
— The denormalized 3×3 lemma. (English summary) **2003j:18009**
Brown, Ronald (*with* Hardie, Keith A.; Kamps, Klaus Heiner; Porter, Timothy) A homotopy double groupoid of a Hausdorff space. (English summary) **2003d:18010**
— *see also* **Al-Agl, Fahd Ali et al., 2003g:18006**
Bruni, Roberto (*with* Meseguer, José; Montanari, Ugo) Symmetric monoidal and Cartesian double categories as a semantic framework for tile logic. (English summary) **2003g:18008**
Duskin, John W. Simplicial matrices and the nerves of weak n-categories. I. Nerves of bicategories. (English summary) **2003f:18005**
Hardie, Keith A. (*with* Kamps, Klaus Heiner; Marcum, Howard J.) The Toda bracket in the homotopy category of a track bicategory. (English summary) **2003h:18005**
— *see also* **Brown, Ronald et al., 2003d:18010**
Higuchi, Akira[1] (*with* Miyoshi, Hiroyuki; Tsujishita, Toru) Strict n-hypercategories. (English summary) **2003j:18010**
Kamps, Klaus Heiner (*with* Porter, Timothy) 2-groupoid enrichments in homotopy theory and algebra. (English summary) **2003e:18010**
— *see also* **Brown, Ronald et al., 2003d:18010** *and* **Hardie, Keith A. et al., 2003h:18005**
Kelly, Gregory Maxwell (*with* Labella, Anna; Schmitt, Vincent; Street, Ross H.) Categories enriched on two sides. (English summary) **2003f:18006**
Labella, Anna *see* **Kelly, Gregory Maxwell et al., 2003f:18006**
Marcum, Howard J. *see* **Hardie, Keith A. et al., 2003h:18005**
Meseguer, José *see* **Bruni, Roberto et al., 2003g:18008**
Miyoshi, Hiroyuki *see* **Higuchi, Akira**[1] **et al., 2003j:18010**
Montanari, Ugo *see* **Bruni, Roberto et al., 2003g:18008**
Porter, Timothy *see* **Brown, Ronald et al., 2003d:18010** *and* **Kamps, Klaus Heiner, 2003e:18010**
Rosebrugh, Robert (*with* Wood, Richard James) Distributive laws and factorization. (English summary) **2003i:18008**
— (*with* Wood, Richard James) Coherence for factorization algebras. (English summary) **2003a:18006**
Schmitt, Vincent *see* **Kelly, Gregory Maxwell et al., 2003f:18006**
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Velinov, Yu. P. Multicategories as an algebraic system. (English summary) **2003m:18008**
Wood, Richard James *see* **Rosebrugh, Robert, 2003a:18006** *and* **2003i:18008**

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Batanin, M. A. On the Penon method of weakening algebraic structures. (English summary) **2003g:18003**
Baues, Hans-Joachim (*with* Jibladze, Mamuka) Suspension and loop objects and representability of tracks. (English summary) **2003c:18016a**
— (*with* Jibladze, Mamuka) Suspension and loop objects in theories and cohomology. (English summary) **2003c:18016b**
Dupont, M. (*with* Vitale, Enrico M.) Proper factorization systems in 2-categories. (English summary) **2003m:18002**
Gaucher, Philippe About the globular homology of higher dimensional automata. (French summary) **2003d:18003**
Grandis, Marco A note on exactness and stability in homotopical algebra. (English summary) **2003e:55022**
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18D10 Monoidal categories (= multiplicative categories), symmetric monoidal categories, braided categories [see also 19D23]

Alonso Álvarez, José N. (*with* Fernández Vilaboa, José M.; González Rodríguez, Ramón) On the (co)commutativity class of a Hopf algebra and crossed products in a braided category. (English summary) **2003d:18011**
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Funk, Jonathon Randall The Hurwitz action and braid group orderings. (English summary) **2003b:18004**
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Adámek, Jiří (*with* Rosický, Jiří; Vitale, Enrico M.) On algebraically exact categories and essential localizations of varieties. (English summary) **2003d:18015**
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Sioen, Mark Non-symmetric exponential laws in the construct PrTop. (English summary) **2003f:18008**
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18D20 Enriched categories (over closed or monoidal categories)

Baues, Hans-Joachim (*with* Jibladze, Mamuka) Classification of abelian track categories. (English summary) **2003f:18009**
Berni-Canani, U. *see* **Moens, M.-A. et al.**, **2003i:18015**
Borceux, Francis (*with* Stubbe, Isar) Short introduction to enriched categories. **2003e:18013**
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Sioen, Mark Symmetric monoidal closed structures in PRAP. (French summary) **2003f:54003**
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Vogel, Hans-Jürgen On generalized Hom-functors of certain symmetric monoidal categories. (English summary) **2003i:18013**
Vogt, R. M. *see* **Schwänzl, Roland**, **2003m:55007**

18D25 Strong functors, strong adjunctions

Items with secondary classifications in 18D25

McCrudden, Paddy Opmonoidal monads. (English summary) **2003m:18012**

18D30 Fibered categories

Items with secondary classifications in 18D30

Cegarra, Antonio M. (*with* García-Calcines, J. M.; Ortega, Jose A.) On graded categorical groups and equivariant group extensions. (English summary) **2003j:18011**
Dèbes, Pierre Descent theory for algebraic covers. (English summary) **2003i:14007**
Funk, Jonathon Randall The Hurwitz action and braid group orderings. (English summary) **2003b:18004**
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18D35 Structured objects in a category (group objects, etc.)

Alp, Murat Actor and Whitehead cat[1]-groups. (English summary) **2003c:18009**
Bourn, Dominique (*with* Gran, Marino) Centrality and normality in protomodular categories. (English summary) **2003d:18017**
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Garzón, Antonio R. (*with* Miranda, Jesús G.; del Río, Aurora) Tensor structures on homotopy groupoids of topological spaces. (English summary) **2003a:18009**
Gran, Marino *see* **Bourn, Dominique**, **2003d:18017**
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Šlapal, Josef Compactness with respect to a convergence structure. (English summary) **2003e:18014**

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Bourn, Dominique (*with* Gran, Marino) Central extensions in semi-abelian categories. (English summary) **2003k:18014**
Casas Miras, José Manuel (*with* Ladra González, Manuel; Vieites Rodríguez, A. M.) Obstruction theory in crossed modules. (English summary) **2003h:20098**
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Gran, Marino *see* **Bourn, Dominique, 2003k:18014**
Jibladze, Mamuka *see* **Baues, Hans-Joachim, 2003f:18009**
Ladra González, Manuel *see* **Casas Miras, José Manuel et al., 2003h:20098**
Marcus, Nizar κ-compact frames. (English summary) **2003e:54024**
Vieites Rodríguez, A. M. (*with* Casas Miras, José Manuel) Some results on central extensions of crossed modules. (English summary) **2003d:18018**
— *see also* **Casas Miras, José Manuel et al., 2003h:20098**

18D50 Operads [see also 55P48]

Casas Miras, José Manuel *see* **Vieites Rodríguez, A. M., 2003d:18018**
Chapoton, Frédéric Opérades différentielles graduées sur les simplexes et les permutoèdres. (English and French summaries) [Differential graded operads related to simplices and permutohedra] **2003g:18011**
Chataur, David Formes différentielles généralisées sur une opérade et modèles algébriques des fibrations. (French summary) [Generalized differential forms on an operad and algebraic models of fibrations] **2003a:18010**
Hinich, Vladimir (*with* Vaintrob, Arkady) Cyclic operads and algebra of chord diagrams. (English summary) **2003h:18013**
Kluge, Liivi (*with* Paal, Eugen) An introduction to operad calculus. (Estonian) (*see* **2003c:00018**)
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Leinster, Tom Generalized enrichment of categories. (English summary) **2003a:18008**
McClure, James E. (*with* Smith, Jeffrey H.) A solution of Deligne's Hochschild cohomology conjecture. (English summary) **2003f:55013**
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Tsygan, Boris *see* **Tamarkin, D. E., 2003e:19008**

18D99 None of the above, but in this section

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Baues, Hans-Joachim Secondary cohomology and the Steenrod square. (English summary) **2003g:55031**
Gelaki, Shlomo Semisimple triangular Hopf algebras and Tannakian categories. (English summary) **2003m:16051**
Labella, Anna (*with* Schmitt, Vincent) Change of base, Cauchy completeness and reversibility. (English summary) **2003d:18016**
Schmitt, Vincent *see* **Labella, Anna, 2003d:18016**
Vogel, Hans-Jürgen On generalized Hom-functors of certain symmetric monoidal categories. (English summary) **2003i:18013**

18Exx Abelian categories

Items with secondary classifications in 18Exx

Gelfand, Sergei I. (*with* Manin, Yuriĭ Ivanovich) ★ Methods of homological algebra. **2003m:18001**
Manin, Yuriĭ Ivanovich *see* **Gelfand, Sergei I., 2003m:18001**

18E05 Preadditive, additive categories

Items with secondary classifications in 18E05

Bourn, Dominique Intrinsic centrality and associated classifying properties. (English summary) **2003i:18016**

18E10 Exact categories, abelian categories

Bourn, Dominique (*with* Gran, Marino) Central extensions in semi-abelian categories. (English summary) **2003k:18014**
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— *see also* **Errata: "Determinant functors on exact categories and their extensions to categories of bounded complexes", 2003k:18015b**
Márki, László *see* **Janelidze, George et al., 2003d:18020**
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19–XX K-theory [see also 16E20, 18F25]

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19A13 Stability for projective modules [see also 13C10]

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19Dxx Higher algebraic K-theory

19D06 Q- and plus-constructions

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19E08 K-theory of schemes [see also 14C35]

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19J10 Whitehead (and related) torsion

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19Lxx Topological K-theory [see also 55N15, 55R50, 55S25]

19L10 Riemann-Roch theorems, Chern characters

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19L20 J-homomorphism, Adams operations [see also 55Q50]

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19L41 Connective K-theory, cobordism [see also 55N22]

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19L47 Equivariant K-theory [see also 55N91, 55P91, 55Q91, 55R91, 55S91]

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19L64 Computations, geometric applications

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20Bxx Permutation groups

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20B10 Characterization theorems

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20B15 Primitive groups

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20B20 Multiply transitive finite groups

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20B25 Finite automorphism groups of algebraic, geometric, or combinatorial structures [see also 05Bxx, 12F10, 20G40, 20H30, 51–XX]

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Praeger, Cheryl E. *see* **Fang, Xin Gui et al., 2003i:20004**
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Rauschning, Jan (*with* Slodowy, Peter) An aspect of icosahedral symmetry. (English summary) **2003i:14060**
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Xu, Ming Yao *see* **Fang, Xin Gui et al., 2003h:05100**; **Lipschutz, Seymour, 2003m:05094** *and* **Xu, Jing[3], 2003m:05095**
Zgrablić, Boris On quasiabelian Cayley graphs and graphical doubly regular representations. (English summary) **2003b:05082**
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20B27 Infinite automorphism groups [see also 12F10]

Shelah, Saharon A countable structure does not have a free uncountable automorphism group. (English summary) **2003j:20005**

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Chowdhury, Ambar (*with* Hart, Bradd; Sokolović, Željko) Affine covers of Lie geometries and the amalgamation property. **2003j:03041**
Droste, Manfred (*with* MacPherson, Dugald; Mekler, Alan H.) Uncountable homogeneous partial orders. (English summary) **2003h:03057**
Evans, David M. (*with* Pantano, M. E.) $\aleph_0$-categorical structures with arbitrarily fast growth of algebraic closure. **2003f:03040**
Giraudet, Michèle (*with* Glass, A. M. W.; Truss, J. K.) Undecidability of automorphism groups. (English summary) **2003d:03069**
Glasner, Eli (*with* Weiss, Benjamin) Minimal actions of the group $\mathbb{S}(\mathbb{Z})$ of permutations of the integers. (English summary) **2003h:37009**
Glass, A. M. W. *see* **Giraudet, Michèle et al., 2003d:03069**
Gross, Benedict H. (*with* McMullen, Curtis T.) Automorphisms of even unimodular lattices and unramified Salem numbers. (English summary) **2003j:11071**
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20B30 Symmetric groups

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Cara, Philippe *see* **Cameron, Peter J., 2003k:20006**
Huang, Ben Wen Characteristic properties of the symmetric group S_5. (Chinese. English and Chinese summaries)
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Schaeffer, Gilles *see* **Poulalhon, Dominique, 2003f:20007**
Seress, Ákos A product decomposition of infinite symmetric groups. (English summary) **2003m:20002**
Zavarnitsin, A. V. Recognition by the set of element orders of symmetric groups of degree r and $r + 1$ for prime r. (Russian. Russian summary) **2003m:20003**
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Beals, Robert (*with* Leedham-Green, Charles R.; Niemeyer, Alice C.; Praeger, Cheryl E.; Seress, Ákos) Permutations with restricted cycle structure and an algorithmic application. (English summary) **2003h:60012**
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Di Nasso, Mauro (*with* Zhang, Yi[12]) Nonstandard analysis and an application to the symmetric group on natural numbers. (English summary) **2003g:03111**
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Rauschning, Jan (*with* Slodowy, Peter) An aspect of icosahedral symmetry. (English summary) **2003i:14060**
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Zhang, Yi[12] *see* **Di Nasso, Mauro, 2003g:03111**

20B35 Subgroups of symmetric groups

Bhattacharjee, Meenaxi (*with* MacPherson, Dugald) Strange permutation representations of free groups. (English summary) **2003k:20007**
MacPherson, Dugald *see* **Bhattacharjee, Meenaxi, 2003k:20007**

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Cameron, Peter J. Permutations. (English summary) **2003m:05003**
Detomi, Eloisa (*with* Lucchini, Andrea; Morini, Fiorenza) How many elements are needed to generate a finite group with good probability? (English summary) **2003k:20112**
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Morozov, Andrei S. On the representability of groups of Σ-definable permutations over admissible sets. (Russian. Russian summary) **2003m:03069**
Niemenmaa, Markku On finite loops whose inner mapping groups are abelian. (English summary) **2003d:20111**
Pliam, John O. A polynomial-time universal security amplifier in the class of block ciphers. (English summary) **2003g:94041**
Pogorelov, B. A. Permutation groups. I. (A survey for the period 1981–1995). (Russian) **2003b:20001**
Rauschning, Jan (*with* Slodowy, Peter) An aspect of icosahedral symmetry. (English summary) **2003i:14060**
Seress, Ákos A product decomposition of infinite symmetric groups. (English summary) **2003m:20002**
Slodowy, Peter *see* **Rauschning, Jan, 2003i:14060**
Zhang, Yi[12] Adjoining almost disjoint permutations. (English summary) **2003d:03084**

20B40 Computational methods

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Portugal, R. *see* **Manssur, L. R. U. et al., 2003h:68158**
Svaiter, B. F. *see* **Manssur, L. R. U. et al., 2003h:68158**

20B99 None of the above, but in this section

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Ehrenborg, Richard The asymptotics of almost alternating permutations. (English summary) **2003d:05015**
Ferretti, Roberto G. (*with* Mazzola, Guerino) Algebraic varieties of musical performances. (English summary) **2003g:00015b**
Gao, Sui-Xiang (*with* Du, Ding-Zhu; Hun, Xiao-Dong; Jia, Xiaohua) Rivest-Vuillemin conjecture is true for monotone Boolean functions with twelve variables. (English summary) **2003d:68097**
Hun, Xiao-Dong *see* **Gao, Sui-Xiang et al., 2003d:68097**
Hyttinen, Tapani Groups acting on geometries. (English summary) **2003m:03060**
Jia, Xiaohua *see* **Gao, Sui-Xiang et al., 2003d:68097**
Kopytov, V. M. (*with* Rachůnek, Jiří) On the varieties of monotone transformation groups. (Russian. English summary) **2003f:06026**
Mazzola, Guerino Classifying algebraic schemes for musical manifolds. (English summary) **2003g:00015a**
— *see also* **Ferretti, Roberto G., 2003g:00015b**
Möller, Rögnvaldur G. Structure theory of totally disconnected locally compact groups via graphs and permutations. (English summary) **2003e:22003**
Moshe, Yossi On permutation groups and partitions. **2003j:20002**
Neusel, Mara D. The transfer in the invariant theory of modular permutation representations. II. (English summary) **2003d:13004**
Rachůnek, Jiří *see* **Kopytov, V. M., 2003f:06026**
Skersys, Gintaras Computing permutation groups of error-correcting codes. (Lithuanian summary) **2003d:94114**
Veress, Laszlo Antal Symmetry principles via interactions and symmetry-violations. (English summary) **2003j:68091**

20Cxx Representation theory of groups [see also 19A22 (for representation rings and Burnside rings)]

20C05 Group rings of finite groups and their modules [see also 16S34]

Jespers, Eric (*with* del Río, Angel; Ruiz Marín, Manuel) Groups generated by two bicyclic units in integral group rings. **2003h:20006**
Kimmerle, Wolfgang A course on integral group rings. **2003a:20005**
Kuhn, Nicholas J. Splitting fields and twisted group rings for the finite general linear groups. (English summary) **2003a:20006**
Lafuente, Julio P. (*with* Martínez-Pérez, Conchita) Extensions of irreducible $\mathbb{K}G$-modules. **2003h:20007**
Linckelmann, Markus (*with* Stalder, Bernard) A reciprocity for symmetric algebras. (English summary) **2003d:20007**
Martínez-Pérez, Conchita *see* **Lafuente, Julio P., 2003h:20007**
Meyer, Harald Konjugationsklassensummen in endlichen Gruppenringen. [Sums of conjugacy classes in finite group rings] **2003k:20008**
del Río, Angel *see* **Jespers, Eric et al., 2003h:20006**
Ruiz Marín, Manuel *see* **Jespers, Eric et al., 2003h:20006**
Stalder, Bernard *see* **Linckelmann, Markus, 2003d:20007**
Tushev, A. V. Minimally infinite modules over metabelian groups of finite rank. (Russian. Russian summary) **2003h:20008**

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Boltje, Robert Monomial resolutions. (English summary) **2003e:16031**
Bryant, Roger M. Free Lie algebras and formal power series. (English summary) **2003k:17004**
Lu, Zi Qun Irreducible representations of general group algebras and their applications. (English summary) **2003c:20010**
Ninomiya, Yasushi Nilpotency indices of the radicals of finite p-solvable group algebras. II. (English summary) **2003j:16036**
Parmenter, M. M. Multiplicative Jordan decomposition in integral group rings of groups of order 16. **2003k:16036**
Polcino Milies, César ★ Unidades em aneis de grupos. (Portuguese) [Units in group rings] **2003i:16048**
Rossmanith, Richard Lie centre-by-metabelian group algebras over commutative rings. (English summary) **2003h:16042**
Telveenus, A. Halidon rings and group algebras. (English summary) **2003a:16036**

20C07 Group rings of infinite groups and their modules [see also 16S34]

Danchev, Peter V. The splitting problem and the direct factor problem in modular abelian group algebras. (English summary) **2003e:20005**
— Numerical invariants for commutative group algebras. (English summary) **2003f:20009**
— Commutative modular group algebras of p-mixed and p-splitting abelian Σ-groups. (English summary) **2003f:20010**
— Basic subgroups in abelian group rings. (English summary) **2003d:20008**
— Isomorphism of commutative group algebras of closed p-groups and p-local algebraically compact groups. (English summary) **2003b:20007**
— Commutative group algebras of cardinality $\aleph_1$. (English summary) **2003k:20009**
Dicks, Warren (*with* Schick, Thomas) The spectral measure of certain elements of the complex group ring of a wreath product. (English summary) **2003i:20005**
Elek, Gábor On the analytic zero divisor conjecture of Linnell. (English summary) **2003m:20004**
Karan, Ram (*with* Kumar, Deepak[1]) Some intersections and identifications in integral group rings. (English summary) **2003c:20004**
Kumar, Deepak[1] *see* **Karan, Ram, 2003c:20004**
Passi, Inder Bir S. Algebraic elements in group rings. (English summary) **2003f:20011**
del Río, Angel (*with* Ruiz Marín, Manuel) Computing large direct products of free groups in integral group rings. (English summary) **2003a:20007**
Ruiz Marín, Manuel *see* **del Río, Angel, 2003a:20007**
Schick, Thomas *see* **Dicks, Warren, 2003i:20005**
Sharma, Sneh On Tahara-simplicity of group rings.

Items with secondary classifications in 20C07

Dimitrova, J. M. (*with* Mihovski, S. V.) On the Jacobson radical of crossed products. (English summary)
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Jespers, Eric (*with* Juriaans, S. O.; de Miranda, J. M.; Rogerio, J. R.) On the normalizer problem. (English summary) **2003f:16044**
Juriaans, S. O. *see* **Jespers, Eric et al., 2003f:16044**
Karan, Ram (*with* Kumar, Deepak[1]; Vermani, Lekh Raj) Some intersection theorems and subgroups determined by certain ideals in integral group rings. II. (English summary) **2003b:16024**
Kumar, Deepak[1] *see* **Karan, Ram et al., 2003b:16024**
Li, Yuanlin On the normalizer problem for integral group rings of torsion groups. (English summary) **2003m:16036**
Lorenz, Martin On Euler classes of abelian-by-finite groups. (English summary) **2003m:16007**
Mihovski, S. V. *see* **Dimitrova, J. M.**
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Mollov, T. Zh. (*with* Nachev, N. A.) On the isomorphism of commutative modular twisted group algebras. (English summary) **2003g:16036**
Nachev, N. A. Isomorphism of semisimple twisted group algebras. (English summary) **2003f:16045**
— *see also* **Mollov, T. Zh., 2003g:16036**
Osterburg, J. M. (*with* Passman, D. S.) Trace methods in twisted group algebras. II. (English summary) **2003i:16043**
Passman, D. S. *see* **Osterburg, J. M., 2003i:16043**
Rogerio, J. R. *see* **Jespers, Eric et al., 2003f:16044**
Rossmanith, Richard Lie centre-by-metabelian group algebras over commutative rings. (English summary) **2003h:16042**
Vasantha Kandasamy, W. B. On group rings which are Marot rings. (English and Romanian summaries)
Vermani, Lekh Raj *see* **Karan, Ram et al., 2003b:16024**

20C08 Hecke algebras and their representations

Ariki, Susumu On representations of classical Hecke algebras. (Japanese)
Broué, Michel (*with* Kim, SungSoon) Familles de caractères des algèbres de Hecke cyclotomiques. (French summary) [Families of characters of cyclotomic Hecke algebras] **2003j:20006**
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20Dxx Abstract finite groups

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20D10 Solvable groups, theory of formations, Schunck classes, Fitting classes, π-length, ranks [see also 20F17]

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20D45 Automorphisms

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Jin, Ping[1] Outer automorphism groups of finite p-nilpotent groups. (English summary) **2003j:20033**
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Kumar, Manoj (*with* Vermani, Lekh Raj) On automorphisms of some p-groups. (English summary) **2003b:20034**
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20D60 Arithmetic and combinatorial problems

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Develin, Mike Avoidable sets in groups. (English summary) **2003j:20035**
Doostie, H. (*with* Golamie, R.) Computing on the Fibonacci lengths of finite groups. (English summary) **2003i:20037**
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Katayama, Shin-ichi On zeta functions associated to finite groups. (English summary) **2003f:20035**
Kondrat'ev, Anatoliĭ S. The Gruenberg-Kegel graph of a finite group and its applications. (Russian) **2003g:20039**
Lev, Arieh *see* **Kaplan, Gil, 2003j:20036**
Lev, Vsevolod F. Three-fold restricted set addition in groups. (English summary) **2003i:20039**
Lucido, Maria Silvia *see* **Deng, Hui Wen et al., 2003g:20038**
Ng, W. S. Some properties of $(k, 0)$-sets of cyclic groups. (English summary) **2003d:20028**
Parmenter, M. M. On groups with redundacy in multiplication. **2003a:20038**
Sapozhenko, A. A. Asymptotics of the number of sum-free sets in abelian groups of even order. (Russian) **2003f:20036**
Schwab, Emil Daniel (*with* Silberberg, Gheorghe) Bemerkungen mit Bezug auf die Anzahl der zyklischen Untergruppen von gegebener Ordnung im Falle einer endlichen Gruppe. [Remarks regarding the number of cyclic subgroups of given order in the case of a finite group] **2003b:20035**
Segev, Yoav The commuting graph of minimal nonsolvable groups. (English summary) **2003b:20036**
Shi, Wu Jie A characterization of $U_3(9)$. (English and Chinese summaries)
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Alavi, S. H. *see* **Iranmanesh, A. et al., 2003b:20022** *and* **2003i:20025**
Bender, Helmut Steiner systems and Mathieu groups revisited. **2003a:05023**
Bowman, Harold (*with* Schultz, Michelle) Conjugacy graphs. (English summary) **2003g:05062**
Cao, Hong Ping (*with* Shi, Wu Jie) Pure quantitative characterization of finite projective special unitary groups. (English summary) **2003i:20024**
Darafsheh, Mohammad R. (*with* Karamzadeh, N. S.) A characterization of groups $\mathrm{PSL}(3, q)$ by their element orders for certain q. (English summary) **2003a:20024**
Elvira, Dominic T. (*with* Hiramine, Yutaka) On semi-regular relative difference sets in nonabelian p-groups. (English summary) **2003m:05036**
Gallardo, Luis (*with* Grekos, Georges; Habsieger, Laurent; Hennecart, François; Landreau, B.; Plagne, Alain) Restricted addition in $\mathbb{Z}/n\mathbb{Z}$ and an application to the Erdős-Ginzburg-Ziv problem. (English summary) **2003b:11011**
Gao, Wei Dong (*with* Geroldinger, Alfred) On the order of elements in long minimal zero-sum sequences. (English summary) **2003d:20074**
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— *see also* **Elvira, Dominic T., 2003m:05036**
Iranmanesh, A. (*with* Alavi, S. H.; Khosravi, Behrooz) A characterization of $\mathrm{PSL}(3, q)$ for $q = 2^m$. (English summary) **2003i:20025**
— (*with* Khosravi, Behrooz) A characterization of $C_2(q)$ where $q > 5$. (English summary) **2003c:20016**
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— (*with* Khosravi, Behnam) A characterization of $E_6(Q)$. (English summary) **2003d:20020**
— *see also* **Iranmanesh, A. et al., 2003b:20022; 2003c:20016; 2003i:20025; 2003m:20013** *and* **Khosravi, Amir, 2003g:20024**
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Mazurov, Viktor Danilovich Recognition of the finite simple groups $S_4(q)$ by their element orders. (Russian. Russian summary) **2003e:20018**
Müller, Thomas W. (*with* Shareshian, John) Enumerating representations in finite wreath products. II. Explicit formulae. (English summary) **2003j:20048**
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— *see also* **Gallardo, Luis et al., 2003b:11011**
Qiu, Wei Sheng Complete settling of the multiplier conjecture for the case of $n = 3p^r$. (English summary) **2003j:05024**
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Zavarnitsin, A. V. Recognition by the set of element orders of symmetric groups of degree r and $r + 1$ for prime r. (Russian. Russian summary) **2003m:20003**
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Ashrafi, Ali Reza (*with* Sahraei, Heydar) On finite groups whose every normal subgroup is a union of the same number of conjugacy classes. (English summary) **2003j:20037**
Besche, Hans Ulrich (*with* Eick, Bettina; O'Brien, E. A.) A millennium project: constructing small groups. (English summary) **2003h:20042**
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Hayashi, Makoto[1] On the closure of an elementary abelian 2-subgroup of a finite group. (English summary) **2003h:20044**
Jing, Naihuan The order of groups satisfying a converse to Lagrange's theorem. (English summary) **2003h:20045**
O'Brien, E. A. *see* **Besche, Hans Ulrich et al., 2003h:20042**
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Goldmann, Mikael (*with* Russell, Alexander) The complexity of solving equations over finite groups. (English summary) **2003i:68050**
Izumi, Masaki Characterization of isomorphic group-subgroup subfactors. **2003f:46100**
Kimura, Hiroshi[1] (*with* Niwasaki, Takashi) Some properties of Hadamard matrices coming from dihedral groups. (English summary) **2003d:05039**
Levi, Ran (*with* Oliver, Robert) Construction of 2-local finite groups of a type studied by Solomon and Benson. (English summary) **2003k:55016**
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Oliver, Robert *see* **Levi, Ran, 2003k:55016**
Russell, Alexander *see* **Goldmann, Mikael, 2003i:68050**
Sīkora, Vīra S. *see* **Zavodya, Mikola V.**
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Zavodya, Mikola V. (*with* Sīkora, Vīra S.) Systems of generators of normal subgroups of the hyperoctahedral group. (Ukrainian. English and Ukrainian summaries)
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20Exx Structure and classification of infinite or finite groups

20E05 Free nonabelian groups

Akhavan-Malayeri, Mehri Writing certain commutators as products of cubes in free groups. (English summary) **2003k:20027**
d'Alessandro, Flavio (*with* Sakarovitch, Jacques) The finite power property in free groups. (English and French summaries) **2003m:20025**
Bogopol'skiĭ, O. V. (*with* Puga, D. V.) On the embedding of the outer automorphism group $\mathrm{Out}(F_n)$ of a free group of rank n into the group $\mathrm{Out}(F_m)$ for $m > n$. (Russian. Russian summary) **2003g:20040**
Borovik, Alexandre V. (*with* Myasnikov, A. G.[2]; Shpilrain, Vladimir) Measuring sets in infinite groups. (English summary) **2003m:20024**
Brinkmann, Peter Splittings of mapping tori of free group automorphisms. (English summary) **2003j:20038**
Clifford, Andrew A class of exponent-sum two equations over groups. (English summary) **2003d:20031**
Csörgő, Piroska (*with* Fine, Benjamin; Rosenberger, Gerhard) On certain equations in free groups. (English summary) **2003h:20046a**
— (*with* Fine, Benjamin; Rosenberger, Gerhard) On certain equations in free groups. (English summary) **2003h:20046b**
Fine, Benjamin *see* **Csörgő, Piroska et al., 2003h:20046a** *and* **2003h:20046b**
Kapovich, Ilya (*with* Myasnikov, A. G.[2]) Stallings foldings and subgroups of free groups. (English summary) **2003a:20039**
Khan, Bilal Positively generated subgroups of free groups and the Hanna Neumann conjecture. (English summary) **2003e:20027**
Lee, Donghi Primitivity preserving endomorphisms of free groups. (English summary) **2003d:20032**
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Meakin, J. (*with* Weil, Pascal) Subgroups of free groups: a contribution to the Hanna Neumann conjecture. (English summary) **2003k:20028**
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Pitsch, Wolfgang Extensions verselles et automorphismes des groupes nilpotents libres. (French summary) [Versal extensions and automorphisms of free nilpotent groups] **2003h:20047**
Puga, D. V. *see* **Bogopol'skiĭ, O. V., 2003g:20040**
Rosenberger, Gerhard *see* **Csörgő, Piroska et al., 2003h:20046a** *and* **2003h:20046b**
Sakarovitch, Jacques *see* **d'Alessandro, Flavio, 2003m:20025**
Shpilrain, Vladimir *see* **Borovik, Alexandre V. et al., 2003m:20024**
Ventura Capell, Enric Fixed subgroups in free groups: a survey. (English summary) **2003f:20037**
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Yan, Zhibin (*with* You, Hong) Two-dimensional representations of the free group with two generators over a finite field. (English summary) **2003j:20040**
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Burillo, José (*with* Ventura Capell, Enric) Counting primitive elements in free groups. (English summary) **2003i:20066**
Ceccherini-Silberstein, Tullio G. On the Grigorchuk-Kurchanov conjecture. (English summary) **2003k:57003**
Conner, Gregory R. (*with* Eda, Katsuya) Free subgroups of free complete products. **2003d:20033**
Diekert, Volker (*with* Gutiérrez, Claudio; Hagenah, Christian) The existential theory of equations with rational constraints in free groups is PSPACE-complete. (English summary) **2003a:68074**
Eda, Katsuya *see* **Conner, Gregory R., 2003d:20033**
Fine, Benjamin (*with* Rosenberger, Gerhard; Weidmann, Richard) Two generator subgroups of free products with commuting subgroups. (English summary) **2003f:20038**
Gonçalves, Daciberg Lima (*with* Kudryavtseva, Elena; Zieschang, Heiner) Intersection index of curves on surfaces and applications to quadratic equations in free groups. (English summary) **2003b:57001**
Gutiérrez, Claudio *see* **Diekert, Volker et al., 2003a:68074**
Hagenah, Christian *see* **Diekert, Volker et al., 2003a:68074**
Jensen, Craig A. Cohomology of $\mathrm{Aut}(F_n)$ in the p-rank two case. (English summary) **2003a:20079**
— Stable rational cohomology of automorphism groups of free groups and the integral cohomology of moduli spaces of graphs. (English summary) **2003m:20048**
Jitsukawa, Toshiaki Malnormal subgroups of free groups. (English summary) **2003i:20070**
Kudryavtseva, Elena *see* **Gonçalves, Daciberg Lima et al., 2003b:57001**
Kuhn, M. Gabriella (*with* Steger, Tim) Paschke's conjecture for the endpoint anisotropic series representations of the free group. (English summary) **2003k:22007**
Kwak, Jin Ho (*with* Lee, Jaeun) Enumeration of graph coverings, surface branched coverings and related group theory. (English summary) **2003b:05083**
Lee, Jaeun *see* **Kwak, Jin Ho, 2003b:05083**
MacPherson, Dugald *see* **Bhattacharjee, Meenaxi, 2003k:20007**
Myasnikov, A. G.[2] *see* **Myasnikov, Alexei D. et al., 2003g:20053**
Myasnikov, Alexei D. (*with* Myasnikov, A. G.[2]; Shpilrain, Vladimir) On the Andrews-Curtis equivalence. (English summary) **2003g:20053**

Paschke, William L. Some irreducible free group representations in which a linear combination of the generators has an eigenvalue. (English summary) **2003e:46100**
Rosenberger, Gerhard *see* **Fine, Benjamin et al., 2003f:20038**
Shpilrain, Vladimir *see* **Myasnikov, Alexei D. et al., 2003g:20053**
Steger, Tim *see* **Kuhn, M. Gabriella, 2003k:22007**
Tomaszewski, Witold *see* **Bagiński, Czesław, 2003j:20060**
Ventura Capell, Enric *see* **Burillo, José, 2003i:20066**
Weidmann, Richard *see* **Fine, Benjamin et al., 2003f:20038**
Zieschang, Heiner *see* **Gonçalves, Daciberg Lima et al., 2003b:57001**

20E06 Free products, free products with amalgamation, Higman-Neumann-Neumann extensions, and generalizations

Arkowitz, Martin (*with* Gutierrez, Mauricio) Equalizers and coactions of groups. (English summary) **2003a:20040**
Bogopol'skiĭ, O. V. (*with* Weidmann, Richard) On the uniqueness of factors of amalgamated products. **2003b:20037**
Bumagin, Inna Examples of amalgamated products. (English summary) **2003c:20025**
Conner, Gregory R. (*with* Eda, Katsuya) Free subgroups of free complete products. **2003d:20033**
Eda, Katsuya (*with* Shelah, Saharon) The non-commutative Specker phenomenon in the uncountable case. **2003g:20041**
— *see also* **Conner, Gregory R., 2003d:20033**
Faĭziev, Valeriĭ A. (*with* Sahoo, Prasanna K.) Pseudocharacters and the problem of expressibility for some groups. (English summary) **2003b:20038**
Fine, Benjamin (*with* Rosenberger, Gerhard; Weidmann, Richard) Two generator subgroups of free products with commuting subgroups. (English summary) **2003f:20038**
Göbel, Rüdiger (*with* Paras, Agnes T.; Shelah, Saharon) Groups isomorphic to all their non-trivial normal subgroups. (English summary) **2003f:20039**
Gutierrez, Mauricio *see* **Arkowitz, Martin, 2003a:20040**
Howie, James A proof of the Scott-Wiegold conjecture on free products of cyclic groups. (English summary) **2003h:20048**
Müller, Thomas W. Modular subgroup arithmetic and a theorem of Philip Hall. (English summary) **2003e:20028**
Niblo, G. A. The singularity obstruction for group splittings. (English summary) **2003i:20040**
Paras, Agnes T. *see* **Göbel, Rüdiger et al., 2003f:20039**
Raptis, E. (*with* Talelli, O.; Varsos, D.) On the Hopficity of certain HNN-extensions with base a Baumslag-Solitar group. (English summary) **2003b:20039**
Rosenberger, Gerhard *see* **Fine, Benjamin et al., 2003f:20038**
Sahoo, Prasanna K. *see* **Faĭziev, Valeriĭ A., 2003b:20038**
Shelah, Saharon *see* **Göbel, Rüdiger et al., 2003f:20039** *and* **Eda, Katsuya, 2003g:20041**
Shwartz, Robert On the Freiheitssatz in certain one-relator free products. I. (English summary) **2003a:20041**
Sokolov, E. On the cyclic subgroup separability of free products of two groups with amalgamated subgroup. (English summary) **2003k:20029**
Talelli, O. *see* **Raptis, E. et al., 2003b:20039**
Varsos, D. *see* **Raptis, E. et al., 2003b:20039**
Weidmann, Richard The rank of planar discontinuous groups. (English summary) **2003k:20030**
— *see also* **Bogopol'skiĭ, O. V., 2003b:20037** *and* **Fine, Benjamin et al., 2003f:20038**
Yamamura, Akihiro Embedding theorems for groups presented via partial automorphisms: a generalization of semidirect products and HNN extensions. (English summary) **2003c:20026**

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Bogopol'skiĭ, O. V. Decompositions of fundamental groups of closed surfaces into free constructions. (English summary) **2003m:57001**
Brinkmann, Peter Splittings of mapping tori of free group automorphisms. (English summary) **2003j:20038**
Cangül, İsmail Naci *see* **Yılmaz, Nihal, 2003k:20082**
Fredericks, Julia D. Local indicability and relative presentations of groups. (English summary) **2003m:20042**
Gitik, Rita (*with* Margolis, Stuart W.; Steinberg, Benjamin) On the Kurosh theorem and separability properties. (English summary) **2003m:20036**
Groves, J. R. J. (*with* Hermiller, S. M.) Isoperimetric inequalities for soluble groups. (English summary) **2003a:20068**
Hermiller, S. M. *see* **Groves, J. R. J., 2003a:20068**
Kim, Goansu (*with* Tang, Francis C. Y.) Separability properties of certain tree products of groups. (English summary) **2003f:20042**
— (*with* Tang, Francis C. Y.) Separability properties of certain polygonal products of graphs. (English summary) **2003b:20044**
Macura, Nataša Amalgamated products of nonpositively curved groups which do not satisfy the quadratic isoperimetric inequality. (English summary) **2003i:20075**
Margolis, Stuart W. *see* **Gitik, Rita et al., 2003m:20036**
Papasoglu, Panagiotis (*with* Whyte, Kevin) Quasi-isometries between groups with infinitely many ends. (English summary) **2003c:20049**
Parker, Christopher (*with* Rowley, Peter J.) Finite completions of the Goldschmidt G_3-amalgam and the Mathieu groups. (English summary) **2003j:20024**
Romanovskiĭ, N. S. (*with* Wilson, J. S.) A Freiheitssatz for free products of pro-p groups. **2003j:20046**
Rowley, Peter J. *see* **Parker, Christopher, 2003j:20024**
Scott, Peter (*with* Swarup, Gadde A.) Regular neighbourhoods and canonical decompositions for groups. (English summary) **2003g:20072**
Serre, Jean-Pierre ★ Trees. **2003m:20032**
Steinberg, Benjamin *see* **Gitik, Rita et al., 2003m:20036**
(Stillwell, John) *see* **Serre, Jean-Pierre, 2003m:20032**
Swarup, Gadde A. *see* **Scott, Peter, 2003g:20072**
Sykiotis, Mihalis On the automorphisms of the fundamental group of a graph of groups and their fixed points. (English summary) **2003i:20056**
— Fixed points of symmetric endomorphisms of groups. (English summary) **2003k:20049**
Tang, Francis C. Y. *see* **Kim, Goansu, 2003b:20044** *and* **2003f:20042**
Ushakov, P. V. IA-automorphisms of free products of two torsion-free abelian groups. (Russian. Russian summary) **2003h:20059**
Weidmann, Richard The Nielsen method for groups acting on trees. **2003c:20029**
Whyte, Kevin *see* **Papasoglu, Panagiotis, 2003c:20049**
Wilson, J. S. *see* **Romanovskiĭ, N. S., 2003j:20046**
Wise, Daniel T. The residual finiteness of negatively curved polygons of finite groups. (English summary) **2003e:20033**
— Residual finiteness of quasi-positive one-relator groups. (English summary) **2003f:20043**
Yılmaz, Nihal (*with* Cangül, İsmail Naci) On the group structure and parabolic points of the Hecke group $H(\lambda)$. (English and Estonian summaries) **2003k:20082**

20E07 Subgroup theorems; subgroup growth

De Falco, Maria (*with* de Giovanni, Francesco; Musella, Carmela; Schmidt, Roland) Groups in which every non-abelian subgroup is permutable. (English summary) **2003m:20027**
Galoppo, Annalisa Groups with dense nearly normal subgroups. (English summary) **2003a:20042**
de Giovanni, Francesco (*with* Vincenzi, Giovanni) Some topics in the theory of pronormal subgroups of groups. **2003m:20028**
— *see also* **De Falco, Maria et al., 2003m:20027**
de la Harpe, Pierre Uniform growth in groups of exponential growth. (English summary) **2003k:20031**
Longobardi, Patrizia (*with* Maj, Mercede) Groups satisfying conditions on 2-generator subgroups. **2003g:20042**
Maj, Mercede *see* **Longobardi, Patrizia, 2003g:20042**
Müller, Thomas W. (*with* Puchta, Jan-Christoph) Character theory of symmetric groups and subgroup growth of surface groups. (English summary) **2003k:20032**
Musella, Carmela *see* **De Falco, Maria et al., 2003m:20027**
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20E08 Groups acting on trees [see also 20F65]

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Bartholdi, Laurent (*with* Grigorchuk, Rostislav I.) On parabolic subgroups and Hecke algebras of some fractal groups. (English summary) **2003c:20027**
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— (*with* Clark, Dennis) Lattices on parabolic trees. (English summary) **2003c:20028**
Chiswell, Ian ★ Introduction to Λ-trees. (English summary) **2003e:20029**
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Forester, Max Deformation and rigidity of simplicial group actions on trees. (English summary) **2003m:20030**
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Kimberley, Jason S. (*with* Robertson, A. Guyan) Groups acting on products of trees, tiling systems and analytic K-theory. (English summary) **2003j:20042**
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Paulin, Frédéric Groupe modulaire, fractions continues et approximation diophantienne en caractéristique p. (English summary) [Modular group, continued fractions and Diophantine approximation in characteristic p] **2003j:20043**
Robertson, A. Guyan *see* **Kimberley, Jason S., 2003j:20042**
Serre, Jean-Pierre ★ Trees. **2003m:20032**
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Leonov, Yu. G. On a lower bound for the growth of a 3-generator 2-group. (Russian. Russian summary) **2003a:20050**
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Veca, Alessandro The Kunze-Stein phenomenon on the isometry group of a tree. (English summary) **2003m:43008**
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20E10 Quasivarieties and varieties of groups

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Bryant, Roger M. (*with* Krasil'nikov, A. N.) Metanilpotent varieties of groups. (English summary) **2003f:20041**
Budkin, A. I. Quasivarieties containing torsion-free nilpotent groups. (Russian. Russian summary) **2003h:20049**
Endimioni, Gérard Groups in which certain equations have many solutions. **2003b:20041**
Gholami, Ahmad *see* **Moghaddam, Mohammad Reza R. et al., 2003k:20034**
Kozhevnikov, P. (*with* Macedońska, O.) On varieties of groups without positive laws. (English summary) **2003h:20050**
Krasil'nikov, A. N. *see* **Bryant, Roger M., 2003f:20041**
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Magidin Viso, Arturo Dominions in varieties generated by simple groups. (English summary) **2003h:20051**
— Nonsurjective epimorphisms in decomposable varieties. (English summary) **2003h:20052**
Mel'nik, Tetyana I. On critical groups with normal centralizers of subgroups. (Ukrainian. English and Ukrainian summaries) **2003g:20043**
Mikaelyan, V. G. Two problems on varieties of groups generated by wreath products. (English summary) **2003g:20044**
Moghaddam, Mohammad Reza R. (*with* Salemkar, Ali Reza) Schur-pair property and the structure of varietal covering groups. (English and Persian summaries) **2003d:20034**
— (*with* Salemkar, Ali Reza; Rismanchian, Mohammad Reza) Generalized covering groups. (English summary) **2003k:20033**
— (*with* Salemkar, Ali Reza; Gholami, Ahmad) Some properties on marginal extensions and the Baer-invariant of groups. (English summary) **2003k:20034**
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— *see also* **Gaglione, Anthony M. et al., 2003h:20104**
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20E15 Chains and lattices of subgroups, subnormal subgroups [see also 20F22]

Antonov, Vladimir A. Groups with restrictions on centralizers. (Russian) **2003h:20053**
Bezushchak, O. O. Splittable normal subgroups of the isometry group of a metric space of generalized Baire type. (Ukrainian. English and Russian summaries) **2003i:20043**
Casolo, Carlo (*with* Mainardis, Mario) Groups with all subgroups f-subnormal. **2003k:20036**
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— (*with* de Giovanni, Francesco; Musella, Carmela; Schmidt, Roland) Groups with metamodular subgroup lattice. (English summary) **2003m:20033**
Ercan, Selami Groups whose proper subgroups are hypercentral of length at most $\leq \omega$. (English summary)
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Sawabe, Masato On a p-local geometry associated with a complex of non-trivial p-subgroups. (English summary) **2003j:20044**
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de Giovanni, Francesco (*with* Musella, Carmela) FC-groups and projectivities. **2003d:20044**
Mikaelyan, V. G. On embeddings of countable generalized soluble groups into two-generated groups. (English summary) **2003b:20051**
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Pálfy, Péter P. (*with* Steinfeld, Ottó) Some group theoretic problems inspired by ring theoretic analogies. (English summary) **2003j:20076**
Robinson, Derek J. S. Minimality and Sylow-permutability in locally finite groups. (English and Ukrainian summaries) **2003k:20054**
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Wang, Jun[1] Normalized matching property of the subgroup lattice of an abelian p-group. (English summary) **2003j:05123**

20E18 Limits, profinite groups

Chinburg, Ted (*with* Glass, Darren) Embedding problems and finite quotients. (English summary) **2003g:20046**
Corson, Jon M. (*with* Ratkovich, Thomas J.) On profinite groups whose power subgroups are closed. (English summary) **2003h:20055**
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Basarab, Şerban A. *see* **Albu, Toma, 2003h:12004**
Holubowski, Waldemar Most finitely generated subgroups of infinite unitriangular matrices are free. (English summary) **2003i:20092**
Jaikin-Zapirain, Andrei (*with* Moretó, Alexander) Character degrees and nilpotence class of finite p-groups: an approach via pro-p groups. (English summary) **2003m:20005**
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McKay, Susan R. *see* **Leedham-Green, Charles R., 2003f:20028**
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du Sautoy, Marcus Polycyclic groups, analytic groups and algebraic groups. **2003c:20037**
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Wingberg, Kay On the Fontaine-Mazur conjecture for CM-fields. (English summary) **2003i:11165**

20E22 Extensions, wreath products, and other compositions [see also 20J05]

Alon, Noga (*with* Lubotzky, Alexander; Wigderson, Avi) Semi-direct product in groups and zig-zag product in graphs: connections and applications (extended abstract). (English summary) (*see* **2003h:68005**)
Bakić, Radoš On the splitting over normal subgroups with abelian Sylow 2-subgroups. (English summary) **2003m:20035**
Göbel, Rüdiger (*with* Shelah, Saharon) Philip Hall's problem on non-abelian splitters. (English summary) **2003i:20044**
Hirshon, Ron Misbehaved direct products. (English summary) **2003h:20057**
Lei, Xueping *see* **Zhu, Zuotong**
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Müller, Thomas W. (*with* Shareshian, John) Enumerating representations in finite wreath products. II. Explicit formulae. (English summary) **2003j:20048**
Panagopoulos, John IA-automorphisms and permutational wreath products. (English summary) **2003j:20049**
Puusemp, Peeter Characterization of a semidirect product of groups by its endomorphism semigroup. (English summary) **2003e:20032**
— On the definability of a semidirect product of cyclic groups by its endomorphism semigroup. (English summary) **2003c:20030**
Shareshian, John *see* **Müller, Thomas W., 2003j:20048**
Shelah, Saharon *see* **Göbel, Rüdiger, 2003i:20044**
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Zavodya, Mikola V. (*with* Sīkora, Vīra S.) Two-element systems of generators of the wreath product of two alternating groups. (Ukrainian. English and Ukrainian summaries)
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Albar, Muhammad A. (*with* Al-Hamed, Maha A.) The affine Weyl group of type $\widetilde{C}_{n-1}$. (English summary) **2003a:20062**
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Iida, Youichi Normal extensions of a cyclic p-group. (English summary) **2003b:20030**
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Sarmin, Nor Haniza Infinite two-generator groups of class two and their non-abelian tensor squares. (English summary) **2003k:20046**
Schoolfield, Clyde H., Jr. Random walks on wreath products of groups. (English summary) **2003f:60018**
Sidki, Said *see* **Brunner, A. M., 2003m:20029**
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20E25 Local properties

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Russo, Alessio *see* **de Giovanni, Francesco, 2003j:20057**

20E26 Residual properties and generalizations

Gitik, Rita (*with* Margolis, Stuart W.; Steinberg, Benjamin) On the Kurosh theorem and separability properties. (English summary) **2003m:20036**
Kim, Goansu (*with* Tang, Francis C. Y.) Separability properties of certain tree products of groups. (English summary) **2003f:20042**
— (*with* Tang, Francis C. Y.) Separability properties of certain polygonal products of graphs. (English summary) **2003b:20044**
Liu, He Guo The strongly residually-finite properties of some infinite soluble groups. (Chinese. English and Chinese summaries) **2003m:20037**
Margolis, Stuart W. *see* **Gitik, Rita et al., 2003m:20036**
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Tang, Francis C. Y. *see* **Kim, Goansu, 2003b:20044** *and* **2003f:20042**
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Wise, Daniel T. The residual finiteness of negatively curved polygons of finite groups. (English summary) **2003e:20033**
— Residual finiteness of quasi-positive one-relator groups. (English summary) **2003f:20043**
— A residually finite version of Rips's construction. (English summary) **2003g:20047**

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Alejandre, Manuel J. (*with* Ballester-Bolinches, A.) On a theorem of Berkovich. (English summary) **2003k:20018**
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Raptis, E. (*with* Talelli, O.; Varsos, D.) On the Hopficity of certain HNN-extensions with base a Baumslag-Solitar group. (English summary) **2003b:20039**
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20E28 Maximal subgroups

Ashrafi, Ali Reza (*with* Soleimani, Rasoul) On the number of maximal theta pairs in a finite group. (English summary) **2003h:20058**
— *see also* **Zhao, Yao Qing, 2003e:20034** *and* **2003e:20035**
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Soleimani, Rasoul *see* **Ashrafi, Ali Reza, 2003h:20058**
Zhao, Yao Qing (*with* Ashrafi, Ali Reza) On s-completions and theta-completions for maximal subgroups. (English summary) **2003e:20034**
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Chen, Shang Di Classification of finite groups whose maximal subgroups are Dedekind groups. (Chinese. English and Chinese summaries) **2003d:20024**
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Wang, Deng Yin Overgroups of the twisted subgroups in type-A Weyl groups. (Chinese. English and Chinese summaries) **2003f:20066**
Wang, Kun Ren Finite groups whose 3-maximal subgroups are normal. (English and Chinese summaries) **2003k:20021**

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20E34 General structure theorems

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20E36 General theorems concerning automorphisms of groups

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20E42 Groups with a BN-pair; buildings [see also 51E24]

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20E99 None of the above, but in this section

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20Fxx Special aspects of infinite or finite groups

20F05 Generators, relations, and presentations

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20F06 Cancellation theory; application of van Kampen diagrams [see also 57M05]

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20F10 Word problems, other decision problems, connections with logic and automata [see also 03B25, 03D05, 03D40, 06B25, 08A50, 68Q70]

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20F12 Commutator calculus

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20F14 Derived series, central series, and generalizations

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20F16 Solvable groups, supersolvable groups [see also 20D10]

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Osin, Denis V. Elementary classes of groups. (Russian. Russian summary) **2003h:20062**
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Smith, Howard On non-nilpotent groups with all subgroups subnormal. (English summary) **2003b:20042**
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20F22 Other classes of groups defined by subgroup chains

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de Giovanni, Francesco *see* **De Falco, Maria et al., 2003m:20033**
Massarotti, Emanuela Groups satisfying the maximal condition on non-ascendant subgroups. (English summary) **2003d:20035**
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20F24 FC-groups and their generalizations

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Galoppo, Annalisa Groups with dense nearly normal subgroups. (English summary) **2003a:20042**
de Giovanni, Francesco (*with* Russo, Alessio) On hypercentral subgroups of infinite groups. (English summary) **2003j:20057**
Musella, Carmela Isomorphisms between lattices of nearly normal subgroups. (English summary) **2003a:20046**
Russo, Alessio *see* **de Giovanni, Francesco, 2003j:20057**

20F28 Automorphism groups of groups [see also 20E36]

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Sykiotis, Mihalis On the automorphisms of the fundamental group of a graph of groups and their fixed points. (English summary) **2003i:20056**
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Shumyatsky, Pavel Coprime automorphisms of profinite groups. (English summary) **2003h:20056**
Tolstykh, Vladimir On the logical strength of the automorphism groups of free nilpotent groups. (English summary) **2003j:03043**

20F29 Representations of groups as automorphism groups of algebraic systems

Il'inykh, A. P. Groups generated by translations of finite loops with a regular automorphism group. (Russian) **2003g:20062**
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Subbotin, Igor Ya. *see* **Kurdachenko, Leonid A., 2003c:20038**

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20F34 Fundamental groups and their automorphisms [see also 57M05, 57Sxx]

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20F67 Hyperbolic groups and nonpositively curved groups

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20Gxx Linear algebraic groups (classical groups) {For arithmetic theory, see 11E57, 11H56; for geometric theory, see 14Lxx, 22Exx; for other methods in representation theory, see 15A30, 22E45, 22E46, 22E47, 22E50, 22E55.}

20G05 Representation theory

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André, Carlos A. M. Basic characters of the unitriangular group (for arbitrary primes). (English summary) **2003g:20075**
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Wachs, Michelle L. *see* **Dong, Xun[2], 2003g:05131**
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20G10 Cohomology theory

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— *see also* **Doty, Stephen R., 2003a:20074**
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20G15 Linear algebraic groups over arbitrary fields

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— (*with* Raghuram, A.) On the correspondence of representations between $\mathrm{GL}(n)$ and division algebras. (English summary) **2003m:22021**
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20G30 Linear algebraic groups over global fields and their integers

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20G45 Applications to physics

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20G99 None of the above, but in this section

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20Hxx Other groups of matrices [see also 15A30]

20H05 Unimodular groups, congruence subgroups [see also 11F06, 19B37, 22E40, 51F20]

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20H20 Other matrix groups over fields

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20Jxx Connections with homological algebra and category theory

20J05 Homological methods in group theory

Álvarez Solano, Víctor (*with* Armario, J. A.; Frau, M. D.; Real Jurado, Pedro) An algorithm for computing cocyclic matrices developed over some semidirect products. (English summary) **2003j:20088**
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20J06 Cohomology of groups

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20J15 Category of groups

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Rodríguez, José Luis *see* **Göbel, Rüdiger et al., 2003j:20022**
Shelah, Saharon *see* **Göbel, Rüdiger et al., 2003j:20022**

20J99 None of the above, but in this section

Casas Miras, José Manuel (*with* Ladra González, Manuel; Vieites Rodríguez, A. M.) Obstruction theory in crossed modules. (English summary) **2003h:20098**
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Chinburg, Ted (*with* Glass, Darren) Embedding problems and finite quotients. (English summary) **2003g:20046**
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20Kxx Abelian groups

20K01 Finite abelian groups

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Geroldinger, Alfred *see* **Gao, Wei Dong, 2003d:20074**
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Pirsic, Gottlieb Explicit calculations and asymptotic behavior of a distance measure between finite abelian groups. (English summary) **2003e:20059**
Sun, Zong Ming The formula of number of cyclic subgroups in a commutative group of order n. (Chinese. English and Chinese summaries)

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Aljadeff, Eli (*with* Kassel, Christian) Explicit norm one elements for ring actions of finite abelian groups. (English summary) **2003e:16039**
Bărcănescu, Şerban Multiplicative partitions. (English summary) **2003h:20108**
Chapman, Scott T. (*with* Freeze, M.; Gao, Wei Dong; Smith, William W.) On Davenport's constant of finite abelian groups. (English summary) **2003a:11017**
Cheung, Kevin K. H. (*with* Mosca, Michele) Decomposing finite abelian groups. (English summary) **2003e:81030**
Finch, Carrie E. (*with* Jones, Lenny) A curious connection between Fermat numbers and finite groups. **2003d:11016**
Freeze, M. *see* **Chapman, Scott T. et al., 2003a:11017**
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Hamidoune, Yahya Ould *see* **Geroldinger, Alfred, 2003j:11020**
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Ng, W. S. Some properties of $(k, 0)$-sets of cyclic groups. (English summary) **2003d:20028**
Sapozhenko, A. A. Asymptotics of the number of sum-free sets in abelian groups of even order. (Russian) **2003f:20036**
Smith, William W. *see* **Chapman, Scott T. et al., 2003a:11017**
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20K10 Torsion groups, primary groups and generalized primary groups

Kirichenko, Volodimir V. (*with* Mashchenko, Lyudmila Z.) Abelian p-groups and modules over discretely valued rings. (Russian. English and Russian summaries)
Mashchenko, Lyudmila Z. *see* **Kirichenko, Volodimir V.**
Paras, Agnes T. (*with* Strüngmann, Lutz) Fully transitive p-groups with finite first Ulm subgroup. (English summary) **2003h:20099**
Strüngmann, Lutz *see* **Paras, Agnes T., 2003h:20099**

Items with secondary classifications in 20K10

Danchev, Peter V. The splitting problem and the direct factor problem in modular abelian group algebras. (English summary) **2003e:20005**
— Basic subgroups in abelian group rings. (English summary) **2003d:20008**
Strüngmann, Lutz Torsion groups in cortorsion classes. (English summary) **2003g:20093**
Vălcan, Dumitru Abelian groups with the direct summand sum property. (English summary) **2003f:20090**

20K15 Torsion-free groups, finite rank

Albrecht, Ulrich (*with* Giovannitti, Anthony J.; Goeters, H. Patrick) A class of torsion-free abelian groups characterized by the ranks of their socles. (English summary) **2003e:20060**
— Fuchs' problem 34 for mixed abelian groups. (English summary) **2003k:20089**
De Vivo, Clorinda (*with* Metelli, Claudia) Decomposing $B^{(1)}$-groups: an algorithm. (English summary) **2003i:20094**
Giovannitti, Anthony J. *see* **Albrecht, Ulrich et al., 2003e:20060**
Goeters, H. Patrick *see* **Albrecht, Ulrich et al., 2003e:20060**
Metelli, Claudia *see* **De Vivo, Clorinda, 2003i:20094**
Sebel'din, A. M. (*with* Smorkalova, A. E.) Definability by homomorphism groups from the right in the class of completely decomposable torsion-free abelian groups. (Russian) **2003g:20091**
Smith, Geoff C. (*with* Traustason, Gunnar) Power groups of free abelian groups of finite rank. (English summary) **2003m:20071**
Smorkalova, A. E. *see* **Sebel'din, A. M., 2003g:20091**
Traustason, Gunnar *see* **Smith, Geoff C., 2003m:20071**

Items with secondary classifications in 20K15

Albrecht, Ulrich (*with* Goeters, H. Patrick; Giovannitti, Anthony J.) Pure submodules and torsion free images of completely decomposable torsion free modules. (English summary) **2003k:16002**
Giovannitti, Anthony J. *see* **Albrecht, Ulrich et al., 2003k:16002**
Goeters, H. Patrick *see* **Albrecht, Ulrich et al., 2003k:16002**
Strüngmann, Lutz On problems by Baer and Kulikov using $V = L$. (English summary) **2003h:20103**
— Torsion groups in cortorsion classes. (English summary) **2003g:20093**

20K20 Torsion-free groups, infinite rank

Blagoveshchenskaya, Ekaterina (*with* Göbel, Rüdiger) Classification and direct decompositions of some Butler groups of countable rank. (English summary) **2003g:20092**
Blass, Andreas Specker's theorem for Nöbeling's group. (English summary) **2003a:20081**
Chekhlov, A. R. Totally transitive torsion-free groups of finite rank. (Russian. Russian summary) **2003h:20100**
Göbel, Rüdiger *see* **Blagoveshchenskaya, Ekaterina, 2003g:20092**
Grinshpon, S. Ya. Completely characteristic subgroups of abelian groups and full transitivity. (Russian. English and Russian summaries) **2003h:20101**
Khisamiev, N. G. On a class of strongly decomposable abelian groups. (Russian. Russian summary) **2003m:20072**
Rocca, Charles F., Jr. (*with* Turner, Edward C.) Test ranks of finitely generated abelian groups. (English summary) **2003h:20102**
Strüngmann, Lutz On problems by Baer and Kulikov using $V = L$. (English summary) **2003h:20103**
— Torsion groups in cortorsion classes. (English summary) **2003g:20093**
Turner, Edward C. *see* **Rocca, Charles F., Jr., 2003h:20102**

Items with secondary classifications in 20K20

Shelah, Saharon (*with* Väisänen, Pauli) Almost free groups and Ehrenfeucht-Fraïssé games for successors of singular cardinals. (English summary) **2003h:03073**
Väisänen, Pauli *see* **Shelah, Saharon, 2003h:03073**

20K21 Mixed groups

Fine, Benjamin *see* **Gaglione, Anthony M. et al., 2003h:20104**
Gaglione, Anthony M. (*with* Spellman, Dennis; Fine, Benjamin) Every abelian group universally equivalent to a discriminating group is elementarily equivalent to a discriminating group. (English summary) **2003h:20104**
Okuyama, Takashi T-high subgroups of abelian groups of torsion-free rank 1. (English summary) **2003i:20095**
Spellman, Dennis *see* **Gaglione, Anthony M. et al., 2003h:20104**

Items with secondary classifications in 20K21

Albrecht, Ulrich Fuchs' problem 34 for mixed abelian groups. (English summary) **2003k:20089**
Breaz, Simion On a class of mixed groups with semi-local WALK-endomorphism ring. **2003m:20073**
Danchev, Peter V. The splitting problem and the direct factor problem in modular abelian group algebras. (English summary) **2003e:20005**
Grinshpon, S. Ya. Completely characteristic subgroups of abelian groups and full transitivity. (Russian. English and Russian summaries) **2003h:20101**
Mollov, T. Zh. (*with* Nachev, N. A.) On the isomorphism of commutative modular twisted group algebras. (English summary) **2003g:16036**
Nachev, N. A. *see* **Mollov, T. Zh., 2003g:16036**
Vălcan, Dumitru Abelian groups with the direct summand sum property. (English summary) **2003f:20090**

20K25 Direct sums, direct products, etc.

O'Neill, John D. Generalizations of a result of Nunke. (English summary) **2003b:20078**
Tuzov, A. N. On a type of infinite abelian normal subgroups of a group. (Ukrainian. English and Ukrainian summaries) **2003g:20094**
Vălcan, Dumitru Abelian groups with the direct summand sum property. (English summary) **2003f:20090**

Items with secondary classifications in 20K25

Blagoveshchenskaya, Ekaterina (*with* Göbel, Rüdiger) Classification and direct decompositions of some Butler groups of countable rank. (English summary) **2003g:20092**
Eda, Katsuya (*with* Shelah, Saharon) The non-commutative Specker phenomenon in the uncountable case. **2003g:20041**
Göbel, Rüdiger *see* **Blagoveshchenskaya, Ekaterina**, **2003g:20092**
Shelah, Saharon *see* **Eda, Katsuya**, **2003g:20041**

20K27 Subgroups

Breaz, Simion (*with* Călugăreanu, Grigore) Abelian groups have/are near Frattini subgroups. (English summary) **2003d:20075**
Călugăreanu, Grigore *see* **Breaz, Simion**, **2003d:20075**

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Gusso, Riccardo Large and small sets with respect to homomorphisms and products of groups. (English summary) **2003k:20090**

20K30 Automorphisms, homomorphisms, endomorphisms, etc.

Abdelalim, S. (*with* Essannouni, H.) Caractérisation des automorphismes d'un groupe abélien ayant la propriété de l'extension. (English summary) [Characterization of the automorphisms of an abelian group with the extension property] **2003g:20095**
Albrecht, Ulrich Abelian groups with self-injective quasi-endomorphism rings. **2003d:20076**
Barreto Molina, Jesús (*with* Subit Gómez, Rosa) Frattini subgroup of a Sylow 2-subgroup of a certain automorphism group. (Spanish. English and Spanish summaries)
— *see also* **Subit Gómez, Rosa**
Breaz, Simion On a class of mixed groups with semi-local WALK-endomorphism ring. **2003m:20073**
Călugăreanu, Grigore Abelian groups with semi-local endomorphism ring. (English summary) **2003i:20096**
Dugas, Manfred (*with* Feigelstock, Shalom) Nil R-mod abelian groups. (English summary) **2003g:20096**
Essannouni, H. *see* **Abdelalim, S.**, **2003g:20095**
Feigelstock, Shalom *see* **Dugas, Manfred**, **2003g:20096**
Fong, Yuen (*with* Ke, W.-F.; Huang, Feng-kuo; Yeh, Yeong Nan) On semi-endomorphism of abelian groups. (English summary) (*see* **2003f:16001**)
Gusso, Riccardo Large and small sets with respect to homomorphisms and products of groups. (English summary) **2003k:20090**
Huang, Feng-kuo *see* **Fong, Yuen et al.**, (**2003f:16001**)
Ke, W.-F. *see* **Fong, Yuen et al.**, (**2003f:16001**)
Krylov, P. A. (*with* Mikhalev, A. V.; Tuganbaev, A. A.) Endomorphism rings of abelian groups. **2003f:20091**
Mikhalev, A. V. *see* **Krylov, P. A. et al.**, **2003f:20091**
Pan, Jiang Min The orders of the automorphism groups of finite commutative groups. (Chinese. English and Chinese summaries)
Rocca, Charles F., Jr. (*with* Turner, Edward C.) Test elements in finitely generated abelian groups. (English summary) **2003g:20097**
Subit Gómez, Rosa (*with* Barreto Molina, Jesús) Presentation of the automorphism group of an abelian group of type $[3^3, 3^3]$. (Spanish. English and Spanish summaries)
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Takegahara, Yugen A generating function for the number of homomorphisms from a finitely generated abelian group to an alternating group. **2003a:20082**
Tuganbaev, A. A. *see* **Krylov, P. A. et al.**, **2003f:20091**
Turner, Edward C. *see* **Rocca, Charles F., Jr.**, **2003g:20097**
Yeh, Yeong Nan *see* **Fong, Yuen et al.**, (**2003f:16001**)

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Albrecht, Ulrich Fuchs' problem 34 for mixed abelian groups. (English summary) **2003k:20089**
Chekhlov, A. R. Totally transitive torsion-free groups of finite rank. (Russian. Russian summary) **2003h:20100**
Leibman, A. Polynomial mappings of groups. (English summary) **2003g:20060**
Rocca, Charles F., Jr. (*with* Turner, Edward C.) Test ranks of finitely generated abelian groups. (English summary) **2003h:20102**
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20K40 Homological and categorical methods

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Trlifaj, Jan (*with* Wallutis, Simone L.) Tilting modules over small Dedekind domains. (English summary) **2003b:13029**
Vitale, Enrico M. On the categorical structure of H^2. (English summary) **2003j:18012**
Wallutis, Simone L. *see* **Trlifaj, Jan**, **2003b:13029**

20K45 Topological methods [see also 22A05, 22B05]

Dikranjan, Dikran Continuous maps in the Bohr topology. (English summary) **2003c:20067**
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Dikranjan, Dikran Van Douwen's problems related to the Bohr topology. (English summary) **2003d:05215**
Sahleh, H. The Schur multiplicator of abelian topological groups: relations among commutators. (English summary) **2003b:22005**
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20K99 None of the above, but in this section

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Feigelstock, Shalom On additive groups of rings.
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Komjáth, Péter Five degrees of separation. (English summary) **2003c:03082**
Kumar, Amresh A note on commutative groups. (English summary)
Remeslennikov, Vladimir (*with* Romanovskiĭ, N. S.) Quasivarieties and q-compact classes of abelian groups. (Russian. Russian summary) **2003k:20035**
Romanovskiĭ, N. S. *see* **Remeslennikov, Vladimir**, **2003k:20035**
Shelah, Saharon *see* **Eklof, Paul C.**, **2003b:03076**
Sury, B. (*with* Thangadurai, R.) Gao's conjecture on zero-sum sequences. (English summary) **2003k:11029**
Thangadurai, R. *see* **Sury, B.**, **2003k:11029**

20L05 Groupoids (i.e. small categories in which all morphisms are isomorphisms) {For sets with a single binary operation, see 20N02; for topological groupoids, see 22A22, 58H05.}

Ivan, Gheorghe Lattices of Ehresmann subgroupoids. (English summary) **2003b:20079**
— Special morphisms of groupoids. (English summary) **2003m:20074**
Shelekhov, A. M. *see* **Tolstikhina, G. A.**
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Heller, Michael (*with* Sasin, Wiesław) Differential groupoids and their application to the theory of spacetime singularities. (English summary) **2003e:83049**
Kamps, Klaus Heiner (*with* Porter, Timothy) 2-groupoid enrichments in homotopy theory and algebra. (English summary) **2003e:18010**
Porter, Timothy *see* **Kamps, Klaus Heiner**, **2003e:18010**
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Vallin, Jean-Michel Groupoïdes quantiques finis. (English summary) [Finite quantum groupoids] **2003e:16054**
Vitale, Enrico M. *see* **Grandis, Marco**, **2003h:18019**

20Mxx Semigroups

20M05 Free semigroups, generators and relations, word problems

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Ayık, H. (*with* Campbell, Colin Matthew; O'Connor, J. J.; Ruškuc, Nik) The semigroup efficiency of direct powers of groups. (English summary) **2003b:20080**

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Bin Ahmad, Abd Ghafur Picture problem for mixed monoid presentations. (English summary)
Bogdanović, Stojan *see* **Ćirić, Miroslav et al., 2003g:20100**
Campbell, Colin Matthew (*with* Robertson, Edmund F.; Ruškuc, Nik; Thomas, Richard M.) Automatic completely-simple semigroups. (English summary) **2003d:20077**
— (*with* Mitchell, J. D.; Ruškuc, Nik) Comparing semigroup and monoid presentations for finite monoids. (English summary) **2003a:20083**
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Ćirić, Miroslav (*with* Petković, Tatjana; Bogdanović, Stojan) Semigroups satisfying some variable identities. (English summary) **2003g:20100**
Dehornoy, Patrick Thin groups of fractions. (English summary) **2003f:20092**
Dolinka, Igor Finite semigroups with slowly growing p_n-sequences. II. (English summary) **2003e:20061**
Goračinova Ilieva, Lidija *see* **Markovski, Smile et al., 2003m:20077**
Guo, Xiao Jiang *see* **Shum, K. P. et al., 2003d:20080**
Hoffmann, Michael (*with* Thomas, Richard M.; Ruškuc, Nik) Automatic semigroups with subsemigroups of finite Rees index. (English summary) **2003f:20093**
— (*with* Thomas, Richard M.) Notions of automaticity in semigroups. (English summary) **2003m:20075**
Holubowski, Waldemar The ubiquity of free subsemigroups of infinite triangular matrices. (English summary) **2003m:20076**
Inata, Isamu (*with* Kobayashi, Yuji) Monoids with subgroups of finite index and the braid inverse monoid. (English summary) (*see* **2003c:00023**)
— (*with* Kataumi, Naoki; Tobita, Takatoshi) The word problem for the braid inverse monoid.
Jackson, David A. Decision and separability problems for Baumslag-Solitar semigroups. (English summary) **2003e:20062**
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Katsura, Masashi (*with* Kobayashi, Yuji) Undecidable properties of monoids with word problem solvable in linear time. (English summary) **2003i:20097**
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Kuyucu, F. *see* **Ayık, H. et al., 2003h:20106**
Lavrik-Männlin, Alla A. On some semigroups of intermediate growth. (English summary) **2003f:20094**
Li, Zhi Min *see* **Zhao, Ping**
Lohrey, Markus Word problems for 2-homogeneous monoids and symmetric logspace. (English summary) **2003d:20078**
Macedońska, O. Two questions on semigroup laws. (English summary) **2003f:20095**
Markovski, Smile (*with* Sokolova, Ana; Goračinova Ilieva, Lidija) On semigroups defined by the identity $xxy = y$. (English summary) **2003m:20077**
Mashevitzky, G. (*with* Schein, Boris M.) Automorphisms of the endomorphism semigroup of a free monoid or a free semigroup. (English summary) **2003k:20092**
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Mitchell, J. D. *see* **Campbell, Colin Matthew et al., 2003a:20083**
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Pereira do Lago, Alair (*with* Simon, Imre) Free Burnside semigroups. (English summary) **2003f:20096**
Petković, Tatjana *see* **Ćirić, Miroslav et al., 2003g:20100**
Pollák, György Arithmetics in free semigroups. (English summary) **2003i:20098**
Ponizovskiĭ, I. S. On dimension congruences on a free semigroup. (Russian. Russian summary) **2003b:20081**
Ren, Xue Ming *see* **Shum, K. P. et al., 2003d:20080**
Renshaw, James On free products of semigroups and a new proof of Isbell's zigzag theorem. (English summary) **2003d:20079**
Robertson, Edmund F. (*with* Ruškuc, Nik; Thomson, M. R.) On finite generation and other finiteness conditions for wreath products of semigroups. (English summary) **2003g:20101**
— *see also* **Campbell, Colin Matthew et al., 2003d:20077**
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Schein, Boris M. *see* **Mashevitzky, G., 2003k:20092**
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— (*with* Steinberg, Benjamin) Extensions and submonoids of automatic monoids. (English summary) **2003i:20100**
Simon, Imre *see* **Pereira do Lago, Alair, 2003f:20096**
Snellman, Jan A poset classifying non-commutative term orders. (English summary) **2003d:20081**
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Steinberg, Benjamin *see* **Silva, Pedro V., 2003i:20100**
Thomas, Richard M. *see* **Campbell, Colin Matthew et al., 2003d:20077; Hoffmann, Michael et al., 2003f:20093** *and* **2003m:20075**
Thomson, M. R. *see* **Robertson, Edmund F. et al., 2003g:20101**
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Yu, Bing-jun (*with* Jiang, Qifen) Generalized bicyclic semigroups and Jones semigroups. (English summary) **2003j:20091**
Zhao, Ping (*with* Li, Zhi Min) Two classes of the maximal free submonoids of the free monoid A^*. (Chinese. English and Chinese summaries)
Zhuchok, Anatoliĭ V. Decompositions of free products. (Ukrainian. English and Ukrainian summaries) **2003g:20102**
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Černý, Anton Lyndon factorization of generalized words of Thue. (English summary) **2003a:68112**
Currie, James D. There are ternary circular square-free words of length n for $n \geq 18$. (English summary) **2003h:05065**
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Durnev, V. G. Investigation of fragments of elementary theories of free semigroups. (Russian. Russian summary) **2003a:03063**
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Guba, V. S. (*with* Sapir, M. V.) Rigidity properties of diagram groups. (English summary) **2003e:20046**
— On some properties of periodic words. (Russian. Russian summary) **2003k:68087**
Guran, I. I. *see* **Banakh, Taras et al., 2003e:20072**
Gutīk, O. V. *see* **Banakh, Taras et al., 2003e:20072**
He, Baihe An application of the word theorem on Heegaard splittings. (English summary)
Héam, Pierre-Cyrille Automata for pro-**V** topologies. (English summary) **2003d:68181**
Jürgensen, Helmut (*with* Kari, Lila; Thierrin, Gabriel) Morphisms preserving densities. (English summary) **2003a:68077**
Kari, Lila *see* **Jürgensen, Helmut et al., 2003a:68077**
Kilibarda, Vesna Coset decomposition of positively self-conjugate inverse submonoids of polycyclic monoids. (English summary) **2003i:20110**
Manturov, V. O. Knots and the bracket calculus. (English summary) **2003j:57012**
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Novikov, B. V. Ideals of free semigroups having cohomological dimension 1. **2003b:20084**
Otto, Friedrich Some results on Green's relations for monoids presented by monadic string-rewriting systems. (English summary) **2003m:68071**
Petrić, Zoran *see* **Borisavljević, Mirjana et al., 2003b:57005**
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Salīĭ, V. N. Idempotent semigroups with the transitive commutativity relation. (Russian) **2003d:20085**
Sapir, M. V. *see* **Guba, V. S., 2003e:20046**
Sibert, Hervé Extraction of roots in Garside groups. (English summary) **2003d:20047**
Silberger, D. *see* **Novak, J. et al., 2003k:05013**
Silberger, Sylvia *see* **Novak, J. et al., 2003k:05013**
Thierrin, Gabriel *see* **Jürgensen, Helmut et al., 2003a:68077**
Todorov, Kalcho Zhelezchev On the minimal polynomials of the N-generalized quaternions. (English summary) (*see* **2003d:00012**)
Tomescu, Ioan On the number of occurrences of all short factors in almost all words. (English summary) **2003i:68116**
Usenko, Vitaliĭ M. Semiretractions and symmetric representations. (Ukrainian. English and Ukrainian summaries)
Veloso da Costa, A. On graph products of automatic monoids. (English summary) **2003b:20092**
Wehrung, Friedrich From join-irreducibles to dimension theory for lattices with chain conditions. (English summary) **2003f:06007**
Weil, Pascal Profinite methods in semigroup theory. **2003d:20087**
Wen, Zhi-Xiong (*with* Wen, Zhi Ying; Wu, Jun^2) Invertible substitutions and local isomorphisms. (English and French summaries) **2003c:05029**
— (*with* Wen, Zhi Ying; Wu, Jun^2) On invertible substitutions with two fixed points. (English and French summaries) **2003c:05030**
Wen, Zhi Ying *see* **Wen, Zhi-Xiong et al., 2003c:05029** *and* **2003c:05030**
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20M07 Varieties of semigroups

Almeida, Jorge (*with* Azevedo, Assis) Globals of pseudovarieties of commutative semigroups: the finite basis problem, decidability and gaps. (English summary) **2003h:20107**
— (*with* Escada, Ana) On the equation $\mathbf{V} * \mathbf{G} = \mathscr{E}\,\mathbf{V}$. (English summary) **2003c:20069**
— Some key problems on finite semigroups. (English summary) **2003a:20085**
Auinger, K. Join decompositions of pseudovarieties involving semigroups with commuting idempotents. (English summary) **2003d:20082**
Azevedo, Assis *see* **Almeida, Jorge, 2003h:20107**
Budimirović, Vjekoslav (*with* Šešelja, Branimir) Operators H, S and P in the classes of p-semigroups and p-semirings. (English summary)
Denecke, Klaus Hyperidentities in semigroups. (English summary) **2003d:20083**
Dolinka, Igor A note on square extensions of bands. (English summary) **2003j:20092**
Escada, Ana *see* **Almeida, Jorge, 2003c:20069**
Fernandes, Vítor H. A new class of divisors of semigroups of isotone mappings of finite chains. (Russian) **2003k:20094**
Jackson, Marcel Small inherently nonfinitely based finite semigroups. (English summary) **2003d:20084**

Jia, Weijia *see* **Long, Dongyang et al., 2003m:20078**
Kaďourek, Jiří (*with* Szendrei, Mária B.) On existence varieties of E-solid semigroups. (English summary) **2003b:20082a**
— (*with* Szendrei, Mária B.) On existence varieties of E-solid semigroups. (English summary) **2003b:20082b**
Long, Dongyang (*with* Jia, Weijia; Peng, Shouli) The variety generatd by finite locally trivial monoids. (English summary) **2003m:20078**
Peng, Shouli *see* **Long, Dongyang et al., 2003m:20078**
Petrich, Mario Varieties of bands. (English summary) **2003f:20097**
— Some relations on the lattice of varieties of completely regular semigroups. (English and Italian summaries) **2003f:20098**
Popov, Vladimir Yur'evich On positive theories of semigroup varieties and semigroup pseudovarieties. (Russian. English and Russian summaries) **2003e:20063**
— On the finite basis property for semigroup varieties. (Russian. Russian summary) **2003i:20101**
Salïĭ, V. N. Idempotent semigroups with the transitive commutativity relation. (Russian) **2003d:20085**
Šešelja, Branimir *see* **Budimirović, Vjekoslav**
Steinberg, Benjamin PG = BG: redux. (English summary) **2003b:20083**
Szendrei, Mária B. *see* **Kaďourek, Jiří, 2003b:20082a** *and* **2003b:20082b**
Vernikov, B. M. On distributive elements of the lattice of nilpotent semigroup varieties. (Russian) **2003f:20099**
— Semigroup varieties with multiplicative restrictions on completely invariant congruences of their free objects. (Russian)
Volkov, Mikhail V. The finite basis problem for finite semigroups: a survey. (English summary) **2003d:20086**
Weil, Pascal Profinite methods in semigroup theory. **2003d:20087**
Yang, Haixuan Two operators on the lattice of completely regular semigroup varieties. (English summary) **2003f:20100**

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Bogdanović, Stojan *see* **Ćirić, Miroslav et al., 2003g:20100**
Budd, V. (*with* Denecke, Klaus; Wismath, Shelly L.) Short-solid superassociative type (n) varieties. (English summary) **2003f:08006**
Catarino, P. M. (*with* Higgins, Peter M.) The pseudovariety generated by all semigroups of orientation-preserving transformations on a finite cycle. (English summary) **2003d:20098**
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— (*with* Wismath, Shelly L.) M-solidity testing systems. (English summary) **2003f:08007**
— (*with* Leeratanavalee, S.) Tree transformations defined by generalized hypersubstitutions. (English summary) **2003i:08013**
— *see also* **Budd, V. et al., 2003f:08006**
Do Long Van *see* **Phan Trung Huy, 2003c:68162**
Goračinova Ilieva, Lidija *see* **Markovski, Smile et al., 2003m:20077**
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Hounnon, Hippolyte *see* **Denecke, Klaus, 2003a:03046**
Jackson, Marcel Generalising congruence regularity for varieties.
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Marczak, Adam W. (*with* Płonka, Jerzy) Square extension of a groupoid. (English summary) **2003h:20126**
Markovski, Smile (*with* Sokolova, Ana; Goračinova Ilieva, Lidija) On semigroups defined by the identity $xxy = y$. (English summary) **2003m:20077**
Pereira do Lago, Alair (*with* Simon, Imre) Free Burnside semigroups. (English summary) **2003f:20096**
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Weil, Pascal *see* **Pin, Jean-Eric, 2003i:06017**
Wismath, Shelly L. *see* **Budd, V. et al., 2003f:08006** *and* **Denecke, Klaus, 2003f:08007**

20M10 General structure theory

Cen, Jian Miao On sandwich semigroups in Boolean group algebras. (English summary) **2003d:20088**
Chandrasekaran, V. M. Split map θ: $T \to S$ with S as a multiplicative sub semigroup of T. (English summary) **2003m:20079**
Chen, Yushu *see* **Zhang, Pengge, 2003f:20103**
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— Right units in the binary relation semigroups. (English and Georgian summaries) **2003i:20102**
Fountain, John B. (*with* Gould, Victoria) Maximal orders in completely 0-simple semigroups. (English summary) **2003a:20086**
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Guo, Xiao Jiang Abundant semigroups with a multiplicative adequate transversal. (English summary) **2003f:20101**
— (*with* Wang, Li Min[3]) Idempotent-connected abundant semigroups which are disjoint unions of quasi-ideal adequate transversals. (English summary) **2003g:20103**
Gutan, M. On the semigroups with very good magnifiers. (English summary) **2003c:20070**
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Khan, Tanveer A. (*with* Lawson, Mark V.) Rees matrix covers for a class of semigroups with locally commuting idempotents. (English summary) **2003c:20071**
Kīzīmenko, Oleksandr M. Categories of coverings and sheaves of semigroups. (Russian. Russian summary) **2003f:20102**
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Li, Gang (*with* Shum, K. P.) A Rees matrix representation theorem for U-semi-superabundant semigroups. (English summary) **2003j:20093**
Liu, Jia Yun (*with* Zhang, Yu Fen; Wang, Jiang Lu) Semidirect product of Clifford quasiregular semigroups. (Chinese. English and Chinese summaries)
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McLeod, Jillian Some notions of size in partial semigroups. (English summary) **2003g:20104**
Mesiar, Radko *see* **Klement, Erich Peter et al., 2003e:20064**
Mitsch, Heinz Introduction to E-inversive semigroups. **2003e:20065**
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Pap, Endre *see* **Klement, Erich Peter et al., 2003e:20064**
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Vasantha Kandasamy, W. B. ★ Smarandache semigroups. **2003i:20103**
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Wang, Jiang Lu *see* **Liu, Jia Yun et al.**
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Yu, Bing-jun Strongly retractable semigroups. (English and Chinese summaries) **2003k:20096**
Zhang, Pengge (*with* Chen, Yushu) On idempotent-connected quasi-adequate semigroups. (English summary) **2003f:20103**
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Dolinka, Igor Finite semigroups with slowly growing p_n-sequences. II. (English summary) **2003e:20061**
Jiang, Qifen *see* **Yu, Bing-jun, 2003j:20091**
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Romano, Daniel Avraám A theorem on subdirect product of semigroups with apartnesses. (English summary) **2003h:03101**
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Szendrei, Mária B. Some open problems in the structure theory of regular semigroups. (English summary) **2003a:20091**
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Xie, Xiang Yun (*with* Cao, Yong Lin) On semilattice decompositions into Archimedean subsemigroups of ordered semigroups. (Chinese. English and Chinese summaries) **2003h:06020**
Yu, Bing-jun (*with* Jiang, Qifen) Generalized bicyclic semigroups and Jones semigroups. (English summary) **2003j:20091**
Zhao, Xian-zhong (*with* Ma, Jian-rong) On bi-closed subbands of a band and free idempotent semirings. (English and Chinese summaries)

20M12 Ideal theory

Ahsan, Javed (*with* Li, Kui Yuan; Shabir, Muhammad) Semigroups characterized by their fuzzy bi-ideals. (English summary) **2003d:20090**
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Li, Kui Yuan *see* **Ahsan, Javed et al., 2003d:20090**
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Bosbach, Bruno Ringlike ideal monoids. (English summary) **2003a:06009**
Heatherly, Henry E. (*with* Tucci, Ralph P.) Maximal ideals in near-rings and semigroups. (English summary) **2003g:16069**
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20M14 Commutative semigroups

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Baupradist, Samruam *see* **Kemprasit, Yupaporn, 2003i:20104**
Branco, M. B. *see* **Rosales, J. C. et al., 2003b:20088** *and* **2003b:20089**
Brookfield, Gary Commutative Noetherian semigroups are finitely generated. (English summary) **2003j:20094**
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Furuhata, Mamoru *see* **Kanemitsu, Mitsuo et al., 2003h:20109**
García-García, J. I. *see* **Rosales, J. C. et al., 2003b:20088**; **2003d:20094**; **2003d:20095** *and* **2003i:20106**
García-Sánchez, P. A. *see* **Rosales, J. C. et al., 2003b:20087**; **2003b:20088** *and* **2003i:20106**
Grillet, Pierre Antoine Fully invariant congruences on free commutative semigroups. (English summary) **2003d:20093**
Halter-Koch, Franz *see* **Chapman, Scott T. et al., 2003f:20104**
Hassler, Wolfgang Factorization properties of Krull monoids with infinite class group. (English summary) **2003c:20072**
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— Integral semigroup extensions and conductor theorems. (English summary) (*see* **2003c:00023**)
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Kepka, Tomáš *see* **El Bashir, Robert, 2003d:20092**
Komeda, Jiryo Numerical semigroups of 2-dimensional toric type. (English summary) (*see* **2003c:00023**)
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— *see also* **Kanemitsu, Mitsuo, 2003c:20073**
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20M15 Mappings of semigroups

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20M17 Regular semigroups

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— (*with* Almeida Santos, M. H.) Regular semigroups with skew pairs of idempotents. (English summary) **2003i:20107**
Bogdanović, Stojan *see* **Mitrović, Melanija et al., 2003e:20068**
Cao, Yong Lin Characterizations of regular ordered semigroups by quasi-ideals. (English summary) **2003k:20101**
Chandrasekaran, V. M. Structure of coextensions of regular semigroups by rectangular bands. (English summary)
Chen, Jian Fei (*with* Rui, Chang Xiang) Isomorphisms between transversals of semigroups. (Chinese. English and Chinese summaries) **2003h:20111**
— (*with* Zhu, Guang Hui) Translation hulls of regular semigroups with inverse transversals. (English summary) **2003d:20096**
Ćirić, Miroslav *see* **Mitrović, Melanija et al., 2003e:20068**
Crvenković, Siniša (*with* Dolinka, Igor) Congruences on $*$-regular semigroups. (English summary) **2003j:20097**
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He, Yong[2] Weakly $\mathcal{T}$-covered completely regular semigroups. (English summary) **2003m:20083**

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— (*with* Yuan, Zhi Ling) Semilattice structure of regular bands. (Chinese. English and Chinese summaries) **2003m:20084**
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— (*with* Xu, Cheng Xian) Fuzzy kernels of fuzzy congruences on a regular semigroup. (Chinese. English and Chinese summaries) **2003j:20099**
— A class of regular semigroups with regular $*$-transversals. (English summary) **2003b:20090**
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Rui, Chang Xiang *see* **Chen, Jian Fei**, **2003h:20111**
Sen, Mridul Kanti (*with* Seth, Arindam) Idempotent separating congruences in a weak P-regular semigroup. (English summary) **2003e:20070**
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Tang, Xilin (*with* Wang, Li Min[3]) Biordered sets of regular semigroups with inverse transversals. (English summary) **2003h:20112**
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— Recent development on some semigroups with special transversals. (Chinese. English and Chinese summaries) **2003m:20086**
— *see also* **Tang, Xilin**, **2003h:20112**
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Weipoltshammer, Barbara Certain congruences on E-inversive E-semigroups. (English summary) **2003g:20107**
Xu, Cheng Xian *see* **Li, Yong Hua[2]**, **2003j:20099**
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Chandrasekaran, V. M. Split map $\theta\colon T \to S$ with S as a multiplicative sub semigroup of T. (English summary) **2003m:20079**
Chvalina, Jan *see* **Hort, Daniel et al.**, **2003g:06001**
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Guo, Xiao Jiang (*with* Wang, Li Min[3]) Idempotent-connected abundant semigroups which are disjoint unions of quasi-ideal adequate transversals. (English summary) **2003g:20103**
Hort, Daniel (*with* Chvalina, Jan; Moučka, Jiří) Characterizations of totally ordered sets by their various endomorphisms. (English summary) **2003g:06001**
Imaoka, Teruo (*with* Fujiwara, Koji) Characterization of locally inverse $*$-semigroups. (English summary) **2003m:20087**
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Kehayopulu, Niovi (*with* Tsingelis, Michael) On left regular ordered semigroups. (English summary) **2003h:06019**
Kemprasit, Yupaporn Regularity and unit-regularity of generalized semigroups of linear transformations. (English summary) **2003i:20112**
Li, Zhenheng The cross section lattices and Renner monoids of the odd special orthogonal algebraic monoids. (English summary) **2003k:20105**
Mitsch, Heinz $\mathscr{L}$-trivial semigroups. (English summary) **2003e:20066**
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You, Tai Jie Maximal regular subsemigroups of certain semigroups of transformations. (English summary) **2003d:20101**

20M18 Inverse semigroups

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Choi, Keunbae (*with* Lim, Yongdo) Birget-Rhodes expansion of groups and inverse monoids of Möbius type. (English summary) **2003f:20106**
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Guran, I. I. *see* **Banakh, Taras et al.**, **2003e:20072**
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Kilibarda, Vesna Coset decomposition of positively self-conjugate inverse submonoids of polycyclic monoids. (English summary) **2003i:20110**
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— A relation for general and inverse semigroups. (English summary) **2003j:20100**
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Stephen, J. B. *see* **McAlister, D. B. et al.**, **2003a:20089**
Szendrei, Mária B. Some open problems in the structure theory of regular semigroups. (English summary) **2003a:20091**
Tian, Zhen Ji (*with* Yan, Ke Ming) Eventually inverse semigroups whose lattice of eventually inverse subsemigroups is semimodular. **2003k:20102**
Vernitskiĭ, A. S. *see* **McAlister, D. B. et al.**, **2003a:20089**
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Zhitomirskiĭ, G. I. Topologically complete representations of inverse semigroups. (English summary) **2003h:20113**
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20M20 Semigroups of transformations, etc. [see also 47D03, 47H20, 54H15]

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Barnes, George (*with* Levi, Inessa) Ranks of semigroups generated by order-preserving transformations with a fixed partition type. (English summary) **2003m:20088**
Catarino, P. M. (*with* Higgins, Peter M.) The pseudovariety generated by all semigroups of orientation-preserving transformations on a finite cycle. (English summary) **2003d:20098**
Diasamidze, Ya. I. To the theory of the binary relation semigroups. (English and Georgian summaries) **2003g:20108**
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Bonato, Anthony On retracts of the random graph and their natural order. (English summary) **2003b:05138**
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Elston, Gillian Z. (*with* Nehaniv, Chrystopher L.) Holonomy embedding of arbitrary stable semigroups. (English summary) **2003m:20092**
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— On the definability of a semidirect product of cyclic groups by its endomorphism semigroup. (English summary) **2003c:20030**
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20M25 Semigroup rings, multiplicative semigroups of rings [see also 16S36, 16Y60]

Okniński, Jan The algebra of the subspace semigroup of $M_2(\mathbb{F}_q)$. (English summary) **2003a:20094**
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Patil, D. P. (*with* Tamone, G.) On the type of the associated graded ring of certain monomial curves. (English summary) **2003i:13003**
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— (*with* Gould, Victoria) Axiomatisability of weakly flat, flat, and projective S-acts. (English summary) **2003i:20114**
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Goseki, Zensiro On three ζ-types of maximal S-subsets of an S-set. (English summary) **2003g:20109**
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Hobby, David Nondualisable semigroups. (English summary) **2003g:20110**
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Zhao, Hua *see* **Feng, De Cheng**

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Mitsch, Heinz $\mathcal{L}$-trivial semigroups. (English summary) **2003e:20066**
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20M35 Semigroups in automata theory, linguistics, etc. [see also 03D05, 68Q70, 68T50]

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Descalço, L. (*with* Ruškuc, Nik) On automatic Rees matrix semigroups. (English summary) **2003a:20097**
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20M50 Connections of semigroups with homological algebra and category theory

Chen, Yuqun (*with* Shum, K. P.) Rees short exact sequences of S-systems. (English summary) **2003d:20103**
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Madanshekaf, A. (*with* Tavakoli, Javad) Tiny objects in the category of M-sets. (English summary) **2003i:20116**
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Baxhaku, Artur Conditions on one-sided non-orderability in semigroups. (English summary) **2003i:20117**
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Kelarev, Andrei V. (*with* Praeger, Cheryl E.) On transitive Cayley graphs of groups and semigroups. (English summary) **2003k:20104**
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Wilke, Thomas Linear temporal logic and finite semigroups. (English summary) **2003d:68175**
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20Nxx Other generalizations of groups

20N02 Sets with a single binary operation (groupoids)

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Imaoka, Teruo (*with* Fujiwara, Koji) Characterization of locally inverse $*$-semigroups. (English summary) **2003m:20087**
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Kinyon, Michael K. (*with* Kunen, Kenneth; Phillips, J. D.) A generalization of Moufang and Steiner loops. (English summary) **2003m:20096**
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Barbé, André (*with* von Haeseler, Fritz) Cellular automata, quasigroups and symmetries. (English summary) **2003e:68087**
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Kiechle, Hubert Frobenius groups with many involutions. (English summary) **2003k:20004**
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Gal′mak, A. M. The Sylow structure of an idempotent n-ary group. (Russian. English and Ukrainian summaries) **2003e:20081**
— Σ_I-closed classes of polyadic groups. (Russian. English and Russian summaries) **2003k:20107**
Janeva, Biljana *see* **Čupona, Ǵorǵi et al.**
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20N20 Hypergroups

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Choi, Byung-Mun *see* **Chung, Sang-Cho**
Chung, Sang-Cho (*with* Choi, Byung-Mun) H_v-groups on the set $\{e, a, b\}$. (English summary)
Corsini, Piergiulio Binary relations, interval structures and join spaces. (English summary)
Davvaz, Bijan (*with* Iranmanesh, Mohammad A.; Farshi, M.) Matroid hypergroups defined on the same set. (English summary)
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— (*with* Ghadiri, M.) Weak equality and exact sequences in H_v-modules. (English summary) **2003k:20108**
— Partial abelian H_v-monoids. (English summary)
— F-approximations in polygroups. (English summary)
— Rough polygroups. (English summary)
— Elementary topics on weak polygroups. (English summary) **2003k:20109**
Dramalidis, A. (*with* Vougiouklis, Thomas) On a class of fuzzy H_v-structures. (English summary) **2003f:20114**
Farshi, M. *see* **Davvaz, Bijan et al.**
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Leoreanu, Violeta Weak mutually associative hyperstructures. I. (English summary)
Mohamed, Mashhour Ibrahim Graphs and generating tree hypergroupoids. (English summary) **2003b:20097**
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Vougiouklis, Thomas On hyperstructures obtained by attaching elements. (English summary) (*see* **2003c:00025**)
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Zahedi, Mohammad Mehdi (*with* Mousavi, S. Sh.; Hosseini, S. N.) On generalized polygroup objects. (English summary) **2003e:20082**
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— A note on fuzzy H_v-submodules. (English summary)
Hosseini, S. N. (*with* Mousavi, S. Sh.; Zahedi, Mohammad Mehdi) Category of polygroup objects. (English and Persian summaries)
Kehagias, Ath. An example of L-fuzzy join space. (English summary) **2003k:08006**
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Davvaz, Bijan Approximations in H_v-modules. (English summary) **2003h:20129**
Demirci, Mustafa Fundamentals of M-vague algebra and M-vague arithmetic operations. (English summary) **2003b:20098**
— (*with* Çoker, Doğan) Remarks on vague groups. (English summary) **2003g:20115**
De Salvo, Mario (*with* Lo Faro, Giovanni) Hypergroups and binary relations. (English summary) **2003j:20105**
Fu, Yun-peng *see* **Yuan, Xue Hai et al.**
Kim, Dae Sig Characteristic fuzzy groups. (English summary) **2003m:20100**
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Liu, Feng *see* **Sun, Li**
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Yao, Bing Xue (*with* Liu, Hua-wen) Generalization of fuzzy quotient groups. (English and Chinese summaries)
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Zahedi, Mohammad Mehdi Fuzzy α-cosets of fuzzy sub-F-polygroups. (English summary) (*see* **2003j:03005**)
— (*with* Kouchi, H. Moradi) (Anti-) fuzzy (normal) sub-F-polygroups and fuzzy α-cosets. (English summary) **2003g:20116**
Zaidi, S. M. A. (*with* Ansari, Q. A.) On co-completeness of L-fuzzy subgroups. (English summary)
Zhang, Cheng Yi (*with* Dang, PingAn) The cardinality and representation of the fuzzy powergroups. (English summary) **2003h:20130**
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Agboola, A. A. A. (*with* Solarin, A. R. T.) Some properties of vague groups. (English summary) (*see* **2003a:00016**)
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— Basic properties of smooth groups. (English summary) (*see* **2003a:00016**)
— On smooth homomorphism of smooth groups. (English summary) (*see* **2003a:00016**)
— On smooth subgroups. (English summary) (*see* **2003a:00016**)
— Smooth generalized groups. (English summary) **2003k:20111**
Ahmad, Abrar *see* **Yadav, N. S.**
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Yagodovskiĭ, P. V. Bicoset groups and symmetric graphs. (Russian. English and Russian summaries) **2003j:20107**
Yao, Bing Xue Generalized power groups and their construction. (Chinese. English and Chinese summaries)

20P05 Probabilistic methods in group theory [see also 60Bxx]

Detomi, Eloisa (*with* Lucchini, Andrea; Morini, Fiorenza) How many elements are needed to generate a finite group with good probability? (English summary) **2003k:20112**
Fulman, Jason Finite affine groups: cycle indices, Hall-Littlewood polynomials, and probabilistic algorithms. (English summary) **2003k:20113**
Lubotzky, Alexander The expected number of random elements to generate a finite group. **2003j:20108**
Lucchini, Andrea (*with* Morini, Fiorenza) On the probability of generating finite groups with a unique minimal normal subgroup. (English summary) **2003c:20082**
— *see also* **Detomi, Eloisa et al., 2003k:20112**
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Borovik, Alexandre V. Centralisers of involutions in black box groups. (English summary) **2003i:60010**

— (*with* Myasnikov, A. G.[2]; Shpilrain, Vladimir) Measuring sets in infinite groups. (English summary) **2003m:20024**

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Shpilrain, Vladimir *see* **Borovik, Alexandre V. et al., 2003m:20024**

Żuk, Andrzej *see* **Pak, Igor, 2003i:20072**

22–XX Topological groups, Lie groups {For transformation groups, see 54H15, 57Sxx, 58–XX. For abstract harmonic analysis, see 43–XX.}

22–01 Instructional exposition (textbooks, tutorial papers, etc.)

Knapp, Anthony W. ★ Lie groups beyond an introduction. (English summary) **2003c:22001**
Lee, Dong Hoon[1] ★ The structure of complex Lie groups. (English summary) **2003k:22001**
Rossmann, Wulf ★ Lie groups. (English summary) **2003f:22001**

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Deitmar, Anton ★ A first course in harmonic analysis. (English summary) **2003b:42001**
Kumaresan, S. ★ A course in differential geometry and Lie groups. (English summary) **2003e:53001**
Ma, Tsoy-Wo ★ Banach-Hilbert spaces, vector measures and group representations. (English summary) **2003e:00004**
(Pressley, Andrew) *see* **Bourbaki, Nicolas, 2003a:17001**

22–02 Research exposition (monographs, survey articles)

Items with secondary classifications in 22–02

Chirikjian, Gregory S. (*with* Kyatkin, Alexander B.) ★ Engineering applications of noncommutative harmonic analysis. (English summary) **2003g:42001**
Kyatkin, Alexander B. *see* **Chirikjian, Gregory S., 2003g:42001**

22–03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 22–03

(Segal, Irving) *see* **Vergne, M., 2003f:01042f**
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22–04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 22–04

Baumann, Gerd MathLie: a computer algebra program for symmetry analysis. (English summary) **2003b:35002**

22–06 Proceedings, conferences, collections, etc.

(Helminck, Gerard F.) *see* **Conference: Lie Groups**
(Vainerman, Leonid) *see* **Locally compact quantum groups and groupoids, 2003m:22001**

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Lie Groups ★ The 2000 Twente Conference on Lie Groups.
Enschede ★ The 2000 Twente Conference on Lie Groups.
Locally compact quantum groups and groupoids ★ Locally compact quantum groups and groupoids. **2003m:22001**
Strasbourg ★ Locally compact quantum groups and groupoids. **2003m:22001**
Workshop:
Quantum Groups, Hopf Algebras and their Applications ★ Locally compact quantum groups and groupoids. **2003m:22001**

Items with secondary classifications in 22–06

(Bajo, Ignacio) *see* **Recent advances in Lie theory, 2003e:00034** *and* **Proceedings: Colloquium on Lie Theory and Applications, 2003h:17002**
(Banyaga, Augustin) *see* **Infinite dimensional Lie groups in geometry and representation theory, 2003c:58001**
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22Axx Topological and differentiable algebraic systems {For topological rings and fields, see 12Jxx, 13Jxx, 16W80.}

22A05 Structure of general topological groups

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22A10 Analysis on general topological groups

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22A15 Structure of topological semigroups

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22A20 Analysis on topological semigroups

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22A22 Topological groupoids (including differentiable and Lie groupoids) [see also 58H05]

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22A25 Representations of general topological groups and semigroups

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22A26 Topological semilattices, lattices and applications [see also 06B30, 06B35, 06F30]

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22A30 Other topological algebraic systems and their representations

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22A99 None of the above, but in this section

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22Bxx Locally compact abelian groups (LCA groups)

22B05 General properties and structure of LCA groups

Loth, Peter A density property of the tori and duality. (English summary) **2003i:22005**

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22C05 Compact groups

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22Dxx Locally compact groups and their algebras

22D05 General properties and structure of locally compact groups

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22D10 Unitary representations of locally compact groups

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Curtis, Robyn *see* **Bekka, Mohammed El Bachir et al., 2003j:22013**
Führ, Hartmut Admissible vectors for the regular representation. (English summary) **2003d:43009**
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22D12 Other representations of locally compact groups

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Özdemir, M. Emin Two theorems on continuously differentiability of the finite-dimensional representations of the groups $\mathbb{C}_0^1, \mathbf{R}^n$. (English summary)
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22D15 Group algebras of locally compact groups

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22D20 Representations of group algebras

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De Vito, Ernesto *see* **Cassinelli, Gianni et al., 2003a:22003**
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22D25 C^*-algebras and W^*-algebras in relation to group representations [see also 46Lxx]

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Kuhn, M. Gabriella (*with* Steger, Tim) Paschke's conjecture for the endpoint anisotropic series representations of the free group. (English summary) **2003k:22007**
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22D30 Induced representations

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22D35 Duality theorems

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Kustermans, Johan The analytic structure of algebraic quantum groups. (English summary) **2003k:16054**
Martín-Peinador, E. *see* **Chasco Ugarte, Ma. Jesús**, **2003f:22002**

22D40 Ergodic theory on groups [see also 28Dxx]

Clozel, Laurent (*with* Otal, Jean-Pierre) Unique ergodicité des correspondances modulaires. (English and French summaries) [Unique ergodicity of modular correspondences] **2003g:22003**
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Einsiedler, Manfred (*with* Schmidt, Klaus[1]) The adjoint action of an expansive algebraic $\mathbb{Z}^d$-action. (English summary) **2003b:37003**
Feres, Renato (*with* Katok, Anatole) Ergodic theory and dynamics of G-spaces (with special emphasis on rigidity phenomena). **2003j:37005**
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22D45 Automorphism groups of locally compact groups

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22D99 None of the above, but in this section

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Gordon, Evgenii I. (*with* Rezvova, Olga A.) On hyperfinite approximations of the field **R**. (English summary) **2003c:03128**
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22Exx Lie groups {For the topology of Lie groups and homogeneous spaces, see 57Sxx, 57Txx; for analysis thereon, see 43A80, 43A85, 43A90.}

22E10 General properties and structure of complex Lie groups [see also 32M05]

Cho, Jin-Hwan (*with* Kim, Min Kyu; Suh, Dong Youp) On extensions of representations for compact Lie groups. (English summary) **2003m:22006**
Geatti, Laura Invariant domains in the complexification of a noncompact Riemannian symmetric space. (English summary) **2003i:22010**
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Fioresi, R. (*with* Lledó, Maria A.) A comparison between star products on regular orbits of compact Lie groups. (English summary) **2003e:53129**
Gindikin, Simon (*with* Krötz, Bernhard) Invariant Stein domains in Stein symmetric spaces and a nonlinear complex convexity theorem. **2003d:32026**
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Liang, Ke (*with* Deng, Shao Qiang) On complete Lie algebras and Lie groups. (English and Chinese summaries) **2003a:22017**
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Yakimov, Milen Symplectic leaves of complex reductive Poisson-Lie groups. (English summary) **2003a:17027**

22E15 General properties and structure of real Lie groups

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Wu, Ta Sun *see* **Previts, W. H.**, **2003a:22005** *and* **2003f:22008**

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Huang, Jing-Song Admissible square quadruplets and semisimple symmetric spaces. (English summary) **2003c:53070**
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Macías-Virgós, Enrique (*with* Martín-Mendez, Pedro) LL-foliations. (English summary) **2003f:57052**
Martín-Mendez, Pedro *see* **Macías-Virgós, Enrique**, **2003f:57052**
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Sahi, Siddhartha *see* **Andler, Martin et al.**, **2003g:53154**
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22E20 General properties and structure of other Lie groups

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Glöckner, Helge (*with* Winkelmann, Jörg) A property of locally compact groups. (English summary) **2003g:22001**
Lansky, Joshua M. (*with* Pollack, David) Hecke algebras and automorphic forms. (English summary) **2003a:11051**
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22E25 Nilpotent and solvable Lie groups

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22E27 Representations of nilpotent and solvable Lie groups (special orbital integrals, non-type I representations, etc.)

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22E41 Continuous cohomology [see also 57R32, 57Txx, 58H10]

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22E43 Structure and representation of the Lorentz group

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22E45 Representations of Lie and linear algebraic groups over real fields: analytic methods {For the purely algebraic theory, see 20G05.}

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22Fxx Noncompact transformation groups

22F05 General theory of group and pseudogroup actions {For topological properties of spaces with an action, see 57S20.}

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22F10 Measurable group actions [see also 22D40, 28Dxx, 37Axx]

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26–XX Real functions [see also 54C30]

26–01 Instructional exposition (textbooks, tutorial papers, etc.)

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26–02 Research exposition (monographs, survey articles)

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26–03 Historical (must also be assigned at least one classification number from Section 01)

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26–06 Proceedings, conferences, collections, etc.

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26Axx Functions of one variable

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26A06 One-variable calculus

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26A12 Rate of growth of functions, orders of infinity, slowly varying functions [see also 26A48]

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26A15 Continuity and related questions (modulus of continuity, semicontinuity, discontinuities, etc.) {For properties determined by Fourier coefficients, see 42A16; for those determined by approximation properties, see 41A25, 41A27.}

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D'Aniello, Emma *see* **Appell, Jürgen et al., 2003d:28001**
Ewert, Janina (*with* Ponomarev, Stanislaw P.) ω-primitives on σ-discrete metric spaces. (English summary) **2003k:54008**
Kotlicka, Elżbieta *see* **Balcerzak, Marek, 2003b:39024**
Kryakin, Yu. V. Whitney's constants and Sendov's conjectures. (English summary) **2003j:41042**
Lisovik, Leonid P. Macrotransducers and applicative systems for partially continuous functions. (Russian. English and Ukrainian summaries) **2003i:68073**
Ponomarev, Stanislaw P. *see* **Ewert, Janina, 2003k:54008**
Pribegin, S. G. On a method for approximation in H^p, $0 < p \leq 1$. (Russian. Russian summary) **2003a:41014**
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Szczuka, Paulina Maximums of strong Świątkowski functions. (English summary) **2003m:26004**
Tabor, Jacek Note on metric spaces and continuous functions. (English summary) **2003g:54026**
Taschner, Rudolf Real numbers and functions exhibited in dialogues. (English summary) **2003c:03115**
Vallin, Robert W. On preserving $(\mathbb{R}, \text{Eucl.})$ and almost periodic functions. (English summary) **2003h:42015**
Väth, Martin *see* **Appell, Jürgen et al., 2003d:28001**
Vinogradov, O. L. (*with* Zhuk, V. V.) Sharp estimates for the norms of differences in terms of the norms of the derivatives and the best majorants of moduli of continuity of periodic functions. (English summary) **2003m:41021**
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Yang, Li[1] *see* **Chen, Yu Qing et al.**
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26A16 Lipschitz (Hölder) classes

Bustamante González, Jorge (*with* Jiménez Pozo, Miguel A.) Fourier series and Lipschitz functions. (Spanish. English summary) **2003c:26005**
Csörnyei, Marianna Lipschitz image of Lipschitz functions. (English summary) **2003d:26001**
D'Aniello, Emma Uncountable level sets of Lipschitz functions and analytic sets. (English summary) **2003f:26004**
Elsner, Carsten On simultaneous approximations of continuous functions by solutions of an algebraic differential equation. (English summary) **2003b:26002**
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Kolwankar, K. M. (*with* Lévy-Véhel, Jacques) A time domain characterization of the fine local regularity of functions. (English summary) **2003k:26006**
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Berg, Lothar (*with* Krüppel, Manfred) De Rham's singular function, two-scale difference equations and Appell polynomials. (English summary) **2003a:39025**
Capitanelli, Raffaela (*with* Lancia, Maria Rosaria) Nonlinear energy forms and Lipschitz spaces on the Koch curve. (English summary) **2003f:46056**
Cheng, Li Xin *see* **Teng, Yan Mei**, **2003m:46071**
Chistyakov, Vyacheslav V. (*with* Rychlewicz, A.) On the extension and generation of set-valued mappings of bounded variation. (English summary) **2003j:26009**
D'Aniello, Emma *see* **Appell, Jürgen et al.**, **2003d:28001**
Kolář, Jan Porous sets that are Haar null, and nowhere approximately differentiable functions. (English summary) **2003d:28021**
Kolwankar, K. M. (*with* Lévy-Véhel, Jacques) Measuring functions smoothness with local fractional derivatives. (English summary) **2003d:26008**
Krüppel, Manfred *see* **Berg, Lothar**, **2003a:39025**
Lancia, Maria Rosaria *see* **Capitanelli, Raffaela**, **2003f:46056**
La Torre, Davide (*with* Rocca, Matteo) A characterization of $C^{k,1}$ functions. (English summary) **2003e:26005**
Lévy-Véhel, Jacques *see* **Kolwankar, K. M.**, **2003d:26008**
Li, Hui Ru² Global convergence analysis for Newton-type methods for nonsmooth equations. (English and Chinese summaries)
Norvaiša, Rimas Chain rules and p-variation. (English summary) **2003c:26016**
Pedersen, Thomas Vils Banach algebras weak* generated by their idempotents. (English summary) **2003j:46073**
Pradolini, Gladis Two-weighted norm inequalities for the fractional integral operator between L^p and Lipschitz spaces. (English summary) **2003a:42024**
Rhoades, Billy E. On the degree of approximation of the conjugate of a function belonging to the weighted $W(L^p, \xi(t))$ class by matrix means of the conjugate series of a Fourier series. (English summary) **2003j:42008**
Rocca, Matteo *see* **La Torre, Davide**, **2003e:26005**
Rychlewicz, A. *see* **Chistyakov, Vyacheslav V.**, **2003j:26009**
Takev, Milko Damyanov On the box dimension of completed graphs. (English summary) **2003m:28012**
Teng, Yan Mei (*with* Cheng, Li Xin) Differentiability of Lipschitzian functions on small sets. (Chinese. English and Chinese summaries) **2003m:46071**
Väth, Martin *see* **Appell, Jürgen et al.**, **2003d:28001**
Watanabe, Hidenori On construction of continuous functions with cusp singularities.

26A18 Iteration [see also 37Bxx, 37Cxx, 37Exx, 39B12, 47H10, 54H25]

Niamsup, Piyapong Dynamics of Newton's functions of Barna's polynomials. (English summary) **2003h:26008**

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Dragan, Valentina (*with* Jones, Arthur Raymond; Stacey, P.) Repeated radicals and the real Fatou theorem. (English summary) **2003k:37058**
Hsu, Chun-Hung (*with* Li, Ming-Chia) Transitivity implies period six: a simple proof. **2003h:37051**
Jarczyk, Witold Reversibility of interval homeomorphisms without fixed points. (English summary) **2003f:39063**
Jones, Arthur Raymond *see* **Dragan, Valentina et al.**, **2003k:37058**
Lampart, Marek Scrambled sets for transitive maps. (English summary) **2003f:37065**
Li, Ming-Chia *see* **Hsu, Chun-Hung**, **2003h:37051**
Liu, Xin He The monotone iterative roots of a class of self-mappings on the interval. (English and Chinese summaries) **2003a:39030**
Martin, Margarita *see* **Alonso-Sanz, Ramón**, **2003b:37021**
Matkowski, Janusz On iteration semigroups of mean-type mappings and invariant means. (English summary) **2003m:39035**
Mimna, Roy A. Errata: "Typical continuous functions are not chaotic in the sense of Devaney" [Real Anal. Exchange **25** (1999/00), no. 2, 947–953; MR 2001e:37027]. (English summary) **2003b:37034**
Navas, Luis M. Iteration of the composition of formal power series. (Spanish. English summary) **2003b:13033**
Pokluda, David Characterization of ω-limit sets of continuous maps of the circle. (English summary) **2003d:37048**
Powierża, Tomasz Strong set-valued iterative roots. (English summary) **2003e:39041**
— On functions with weak iterative roots. (English summary) **2003d:39038**
— Higher order set-valued iterative roots of bijections. (English summary) **2003m:39032**
Stacey, P. *see* **Dragan, Valentina et al.**, **2003k:37058**

26A21 Classification of real functions; Baire classification of sets and functions [see also 03E15, 28A05, 54C50]

Appell, Jürgen "Small" sets and operators in functional analysis. (Italian. English summary) **2003g:26004**
Ćwiek, Ilona (*with* Pawlak, Ryszard J.; Świątek, Bożena) On some subclasses of Baire 1 functions. (English summary) **2003e:26003**
Natkaniec, T. (*with* Wesołowska, J.) On the convergence of ω_1 sequences of real functions. (English summary) **2003d:26002**
Pawlak, Ryszard J. (*with* Wilczyński, Władysław; Świątek, Bożena) On some properties of the class $\mathscr{A}^*$. (English summary) **2003a:26006**
— (*with* Świątek, Bożena) On Baire one point of functions. (English summary) **2003m:26003**
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Świątek, Bożena *see* **Pawlak, Ryszard J. et al.**, **2003a:26006**; **2003m:26003** *and* **Ćwiek, Ilona et al.**, **2003e:26003**
Szczuka, Paulina Maximums of strong Świątkowski functions. (English summary) **2003m:26004**
Wesołowska, J. *see* **Natkaniec, T.**, **2003d:26002**
Wilczyński, Władysław *see* **Pawlak, Ryszard J. et al.**, **2003a:26006**
Zakharov, Valeriĭ Konstantinovich Classification of Borel sets and functions for an arbitrary space. (Russian) **2003k:26007**

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Balcerzak, Marek (*with* Kotlicka, Elżbieta) Difference properties for some classes of functions. (English summary) **2003b:39024**
Carrese, R. (*with* Łazarow, Ewa) A Darboux property of $\mathscr{J}_1$-approximate partial derivatives. (English summary) **2003f:26012**
Ciesielski, Krzysztof² (*with* Fejzić, Hajrudin; Freiling, Chris) Measure zero sets with non-measurable sum. (English summary) **2003f:28004**
Daróczy, Zoltán (*with* Páles, Zsolt) Gauss-composition of means and the solution of the Matkowski-Sutô problem. (English summary) **2003j:39061**
Evans, Michael Jon (*with* Humke, Paul D.) Exceptional sets for universally polygonally approximable functions. (English summary) **2003a:26004**
Fejzić, Hajrudin *see* **Ciesielski, Krzysztof² et al.**, **2003f:28004**
Freiling, Chris *see* **Ciesielski, Krzysztof² et al.**, **2003f:28004**
Humke, Paul D. *see* **Evans, Michael Jon**, **2003a:26004**
Jayne, John E. (*with* Rogers, C. Ambrose) ★ Selectors. (English summary) **2003j:54018**
Kotlicka, Elżbieta *see* **Balcerzak, Marek**, **2003b:39024**
Kubiś-Lipowska, Agnieszka (*with* Łazarow, Ewa) On some properties of $\mathscr{J}$-approximate Dini derivatives. (English summary) **2003h:26010**
Łazarow, Ewa *see* **Carrese, R.**, **2003f:26012** *and* **Kubiś-Lipowska, Agnieszka**, **2003h:26010**
Marciniak, Mariola (*with* Pawlak, Ryszard J.) On the restrictions of functions, finitely continuous functions and path continuity. (English summary) **2003h:26006**
Páles, Zsolt *see* **Daróczy, Zoltán**, **2003j:39061**
Pawlak, Ryszard J. *see* **Marciniak, Mariola**, **2003h:26006**
Rogers, C. Ambrose *see* **Jayne, John E.**, **2003j:54018**
Šalát, Tibor *see* **Baláž, Vladimír**, **2003k:26004**
Shi, Hong Jian Prevalence of some known typical properties. (English summary) **2003d:28022**
Strońska, Ewa On some classes of measurable functions with Baire property. (English summary) **2003j:28014**
Szuca, Piotr On some properties of sets blocking almost continuous functions. (English summary) **2003a:26005**
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Zakharov, Valeriĭ Konstantinovich Classification of Borel sets and functions in the general case. (Russian) **2003j:28004**

26A24 Differentiation (functions of one variable): general theory, generalized derivatives, mean-value theorems [see also 28A15]

Alikhani-Koopaei, Aliasghar On extreme first return path derivatives. (English summary) **2003b:26003**
Ash, J. Marshall (*with* Catoiu, Stefan; Ríos-Collantes-De-Terán, Ricardo) On the nth quantum derivative. (English summary) **2003h:26009**
Berezhnoĭ, E. I. (*with* Novikov, A. V.) On the halo problem in the theory of differentiation of integrals. (Russian. Russian summary) **2003k:26008**
Catoiu, Stefan *see* **Ash, J. Marshall et al.**, **2003h:26009**
Chen, Zhi Bing A higher-order mean value theorem based on the Lagrange interpolation. (Chinese. English and Chinese summaries)
Chew, Tuan Seng On Henstock's inner variation and strong derivatives. (English summary) **2003f:26005**
Das, Jyoti A generalization of the Leibnitz rule of successive differentiation. (English summary)
Dobbs, David E. On positive functions with positive derivatives. (English summary)
Dugošija, Djordje P. A generalization of Darboux theorem. (English summary) **2003g:26005**
Feeman, Timothy G. (*with* Marrero, Osvaldo) The right-hand derivative of an integral. **2003c:26006**
Ford, G. W. (*with* O'Connell, R. F.) Note on the derivative of the hyperbolic cotangent. (English summary) **2003c:26007**
Garg, K. M. A unified theory of bilateral derivates. (English summary) **2003j:26002**
Gould, H. W. The generalized chain rule of differentiation with historical notes. **2003a:26007**
Hochwald, Scott *see* **Tong, Jingcheng**

Holbrook, John A. (*with* Kim, Sung Soo[1]) A very mean value theorem. **2003m:26005**
Ivan, Mircea A note on a Cauchy-type mean value theorem. (English summary) **2003e:26004**
Kalina, Martin Nearness differentiable functions. (English summary) **2003d:26003**
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Kubiś-Lipowska, Agnieszka (*with* Łazarow, Ewa) On some properties of $\mathcal{I}$-approximate Dini derivatives. (English summary) **2003h:26010**
La Torre, Davide (*with* Rocca, Matteo) A characterization of $C^{k,1}$ functions. (English summary) **2003e:26005**
Łazarow, Ewa *see* **Kubiś-Lipowska, Agnieszka, 2003h:26010**
Marrero, Osvaldo *see* **Feeman, Timothy G., 2003c:26006**
Mitra, Subhen (*with* Mukhopadhyay, Satya Narayan) Derivates, approximate derivates and porosity derivates of n-convex functions. (English summary) **2003d:26004**
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O'Connell, R. F. *see* **Ford, G. W., 2003c:26007**
Pötzsche, Christian Chain rule and invariance principle on measure chains. (English summary) **2003e:26006**
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Ray, Subhasis *see* **Mukhopadhyay, Satya Narayan, 2003d:26005**
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Satyanarayan Rao, Aribindi On the successive derivatives of abstract Stepanov-almost periodic functions. (English summary) **2003k:26009**
Špitalský, Vladimír (*with* Toma, Vladimír) Weak and strong differentiability are nearly the same for real functions. (English summary) **2003h:26011**
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Stănică, Pantelimon (*with* Stănică, Gabriela) There are infinitely many Smarandache derivations, integrations and lucky numbers. (English summary)
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Bongiorno, Benedetto (*with* Di Piazza, L.; Skvortsov, V. A.) On dyadic integrals and some other integrals associated with local systems. (English summary) **2003h:26013**
Cheng, Li Xin *see* **Teng, Yan Mei, 2003m:46071**
Cui, Ming Gen (*with* Gao, Guang-hong; Phil, Ungchung) On the differentiation of a function of p-adic variable. (English and Chinese summaries)
D'Aniello, Emma Level sets of Hölder functions and Hausdorff measures. (English summary) **2003h:28008**
Daróczy, Zoltán (*with* Páles, Zsolt) Gauss-composition of means and the solution of the Matkowski-Sutô problem. (English summary) **2003j:39061**
Di Piazza, L. *see* **Bongiorno, Benedetto et al., 2003h:26013**
Gao, Guang-hong *see* **Cui, Ming Gen et al.**
Ibrahimov, E. J. Asymptotic estimations of approximation of functions by linear positive operators. (English and Azerbaijani summaries) **2003c:41032**
Johnson, Warren P. The curious history of Faà di Bruno's formula. **2003d:01019**
Karafyllis, Iasson Necessary and sufficient conditions for the existence of stabilizing feedback for control systems. (English summary) **2003m:93071**
Orlov, I. V. A finite increment formula for mappings into inductive scales of spaces. (Russian. English, Russian and Ukrainian summaries) **2003d:46004**
Páles, Zsolt *see* **Daróczy, Zoltán, 2003j:39061**
Pawlak, Ryszard J. (*with* Wilczyński, Władysław; Świątek, Bożena) On some properties of the class $\mathcal{A}^*$. (English summary) **2003a:26006**
Pawlikowska, Iwona A characterization of polynomials through Flett's MVT. (English summary) **2003e:39049**
Phil, Ungchung *see* **Cui, Ming Gen et al.**
Richman, Fred Pointwise differentiability. (English summary) **2003b:03099**
Sablik, Maciej Functional equations and mean value theorems. (English summary) (*see* **2003b:39002**)
Skvortsov, V. A. *see* **Bongiorno, Benedetto et al., 2003h:26013**
Świątek, Bożena *see* **Pawlak, Ryszard J. et al., 2003a:26006**
Teng, Yan Mei (*with* Cheng, Li Xin) Differentiability of Lipschitzian functions on small sets. (Chinese. English and Chinese summaries) **2003m:46071**
Toader, Silvia Derivatives of generalized means. (English summary) **2003e:26043**
Turinici, Mihai Differential mean value properties for quasi-continuous functions. III. (English summary) **2003c:46056**
Vinogradov, O. L. (*with* Zhuk, V. V.) Sharp estimates for the norms of differences in terms of the norms of the derivatives and the best majorants of moduli of continuity of periodic functions. (English summary) **2003m:41021**
Wilczyński, Władysław *see* **Pawlak, Ryszard J. et al., 2003a:26006**
Zhuk, V. V. *see* **Vinogradov, O. L., 2003m:41021**

26A27 Nondifferentiability (nondifferentiable functions, points of nondifferentiability), discontinuous derivatives

Barański, Krzysztof On the complexification of the Weierstrass non-differentiable function. (English summary) **2003e:26008**
Huang, Xue Mei *see* **Yang, Xiao Ling, 2003m:26006**
Stankov, Dragan The fractal dimension of graphs of some functions. (English summary) **2003a:26008**
Tang, Jia De (*with* Yang, Guang Jun) Construction of non-differentiable continuous functions and their Bouligand dimension. (Chinese. English and Chinese summaries)
Wachowicz, Artur Baire category and standard operations on pairs of continuous functions. (English summary) **2003j:26004**
Yang, Guang Jun *see* **Tang, Jia De**
Yang, Xiao Ling (*with* Huang, Xue Mei) Series expansion for the Koch curve. (Chinese. English and Chinese summaries) **2003m:26006**

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Breutzmann, Josef M. (*with* Juedes, David W.; Lutz, Jack H.) Baire category and nowhere differentiability for feasible real functions. (English summary) **2003f:68038**
Daftardar, Varsha *see* **Babakhani, Azizollah, 2003e:26009**
Juedes, David W. *see* **Breutzmann, Josef M. et al., 2003f:68038**
Kairies, Hans-Heinrich Properties of an operator acting on the space of bounded real functions and certain subspaces. (English summary) **2003f:47053**
— On an operator preserving lacunarity of Fourier series. (English summary) **2003a:47065**
Kolář, Jan Porous sets that are Haar null, and nowhere approximately differentiable functions. (English summary) **2003d:28021**
Lutz, Jack H. *see* **Breutzmann, Josef M. et al., 2003f:68038**
Wang, Shi Jun On the proof of the K-dimensions of Weierstrass-type functions graphs. (Chinese. English and Chinese summaries)
Watanabe, Hidenori On construction of continuous functions with cusp singularities.

26A30 Singular functions, Cantor functions, functions with other special properties

Plaza S., Sergio Conjugacy class of regular central Cantor sets. (English summary) **2003k:26010**

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Ablaev, Farid M. (*with* Ablayeva, Svetlana) A discrete approximation and communication complexity approach to the superposition problem. (English summary) **2003e:68031**
Ablayeva, Svetlana *see* **Ablaev, Farid M., 2003e:68031**
Appell, Jürgen (*with* D'Aniello, Emma; Väth, Martin) Some remarks on small sets. (English summary) **2003d:28001**
Berg, Lothar (*with* Krüppel, Manfred) De Rham's singular function, two-scale difference equations and Appell polynomials. (English summary) **2003a:39025**
D'Aniello, Emma Uncountable level sets of Lipschitz functions and analytic sets. (English summary) **2003f:26004**
— Level sets of Hölder functions and Hausdorff measures. (English summary) **2003h:28008**
— *see also* **Appell, Jürgen et al., 2003d:28001**
Dekking, F. Michel *see* **Li, Wenxia et al., 2003g:28018**
Estrada, Ricardo (*with* Fulling, Stephen A.) How singular functions define distributions. (English summary) **2003d:46050**
Frank, Barbara *see* **Schweizer, Jürgen, 2003i:28010**
Fulling, Stephen A. *see* **Estrada, Ricardo, 2003d:46050**
Garg, K. M. A unified theory of bilateral derivates. (English summary) **2003j:26002**
Hu, Tian-You (*with* Lau, Ka-Sing) Fourier asymptotics of Cantor type measures at infinity. (English summary) **2003d:42011**
Krüppel, Manfred *see* **Berg, Lothar, 2003a:39025**
Lau, Ka-Sing *see* **Hu, Tian-You, 2003d:42011**
Li, Wenxia (*with* Xiao, Dongmei; Dekking, F. Michel) Non-differentiability of devil's staircases and dimensions of subsets of Moran sets. (English summary) **2003g:28018**
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Morris, Jerry The Hausdorff dimension of the nondifferentiability set of a nonsymmetric Cantor function. (English summary) **2003c:28007**
Richter, Christian n-term approximation by controllable step functions. (English summary) **2003b:41028**
Schweizer, Jürgen (*with* Frank, Barbara) Calculus on linear Cantor sets. (English summary) **2003i:28010**
Shi, Hong Jian Prevalence of some known typical properties. (English summary) **2003d:28022**
Väth, Martin *see* **Appell, Jürgen et al., 2003d:28001**
Xiao, Dongmei *see* **Li, Wenxia et al., 2003g:28018**

26A33 Fractional derivatives and integrals

Al-amri, B. A. *see* **Aouf, M. K., 2003k:26011**
Anastassiou, George A. (*with* Koliha, J. J.; Pečarić, Josip E.) Opial type L^p-inequalities for fractional derivatives. (English summary) **2003g:26006**
— (*with* Goldstein, Jerome A.) Fractional Opial type inequalities and fractional differential equations. (English summary) **2003h:26012**
Aouf, M. K. (*with* Al-amri, B. A.) On certain fractional operators for certain subclass of prestarlike functions defined by Salagean operator. (English summary) **2003k:26011**
Babakhani, Azizollah (*with* Daftardar, Varsha) On calculus of local fractional derivatives. (English summary) **2003e:26009**
Baeumer, Boris (*with* Meerschaert, Mark M.) Stochastic solutions for fractional Cauchy problems. (English summary) **2003d:26006**
Banerji, P. K. (*with* Deora, Yogendra) Multiple Dirichlet average and fractional derivative. (English summary) **2003m:26007**
Ben Adda, Fayçal The differentiability in the fractional calculus. (English summary)
Beyer, Horst R. *see* **Kempfle, Siegmar et al., 2003k:26012**
Butzer, Paul L. (*with* Westphal, U.) An introduction to fractional calculus. **2003g:26007**
Chen, I-Chun *see* **Nishimoto, Katsuyuki et al., 2003i:26007**
Chyan, Ding-Kuo *see* **Tu, Shih Tong et al., 2003c:26011**
Daftardar, Varsha *see* **Babakhani, Azizollah, 2003e:26009**

Deora, Yogendra *see* **Banerji, P. K., 2003m:26007**
Fuenmayor, Marlenys *see* **Nishimoto, Katsuyuki et al.**
Fukunaga, Masataka A difference method for initial value problems for ordinary fractional differential equations. (English summary) **2003d:26007**
— A difference method for initial value problems of fractional wave diffusion equations. (English summary) **2003c:26008**
Goldstein, Jerome A. *see* **Anastassiou, George A., 2003h:26012**
Hartley, Tom T. *see* **Lorenzo, Carl F., 2003j:26005**
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26A46 Absolutely continuous functions

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26Bxx Functions of several variables

26B05 Continuity and differentiation questions

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26Cxx Polynomials, rational functions

26C05 Polynomials: analytic properties, etc. [see also 12Dxx, 12Exx]

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26D99 None of the above, but in this section

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26Exx Miscellaneous topics [see also 58Cxx]

26E05 Real-analytic functions [see also 32B05, 32C05]

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26E10 C^∞-functions, quasi-analytic functions [see also 58C25]

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26E20 Calculus of functions taking values in infinite-dimensional spaces [see also 46E40, 46G10, 58Cxx]

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26E25 Set-valued functions [see also 28B20, 54C60] {For nonsmooth analysis, see 49J52, 58Cxx, 90Cxx.}

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26E30 Non-Archimedean analysis [see also 12J25]

Berz, Martin *see* **Shamseddine, Khodr**, **2003f:26046**
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26E35 Nonstandard analysis [see also 03H05, 28E05, 54J05]

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26E40 Constructive real analysis [see also 03F60]

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26E50 Fuzzy real analysis [see also 03E72, 28E10]

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Anastassiou, George A. Rate of convergence of fuzzy neural network operators, univariate case. (English summary) **2003h:26044**
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26E60 Means [see also 47A64]

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— (*with* Pearce, Charles E. M.; Pečarić, Josip E.) Means, g-convex dominated functions & Hadamard-type inequalities. (English summary) **2003j:26017**
— *see also* **Barnett, Neil S. et al.**, **2003c:26023**
Fink, A. M. *see* **Barnett, Neil S. et al.**, **2003c:26023**
Fujii, Jun Ichi On the means of convex functions. (Japanese)
Gianella, Gian Mario *see* **Čerin, Zvonko et al.**, **2003k:26022**
Govedarica, Vidan (*with* Jovanović, Milan V.) On the inequalities of Ky Fan, Wang-Wang and Alzer. **2003e:26029**
Hajdu, Gabriella An extension theorem for the Matkowski-Sutô problem for conjugate arithmetic means. (English summary) **2003e:39046**
Jovanović, Milan V. *see* **Govedarica, Vidan**, **2003e:26029**
Kim, Young-Ho (*with* Rassias, Themistocles M.) Properties of some mean values and functional equations. (English summary) **2003f:39069**
Leazizi, Fatima *see* **Raïssouli, Mustapha**, **2003k:15033**
Liu, Zheng[1] Minkowski's inequality for extended mean values. (English summary) **2003h:26023**
— Inequalities for some means. (English and Chinese summaries) **2003b:26020**
Losonczi, László Inequalities for Cauchy mean values. (English summary) **2003f:26039**
Matkowski, Janusz On invariant generalized Beckenbach-Gini means. (English summary) **2003j:39063**
Mercer, A. McD. A monotonicity property of power means. (English summary) **2003f:26041**
Neuman, Edward (*with* Sándor, József) Inequalities involving Stolarsky and Gini means. (English summary) **2003m:26035**
Páles, Zsolt *see* **Daróczy, Zoltán**, **2003e:39045**
Pearce, Charles E. M. *see* **Dragomir, Sever Silvestru et al.**, **2003j:26017**
Pečarić, Josip E. *see* **Čižmešija, Aleksandra**, **2003b:26015**; **2003h:26031** *and* **Dragomir, Sever Silvestru et al.**, **2003j:26017**
Persson, Lars Erik (*with* Stepanov, Vladimir D.) Weighted integral inequalities with the geometric mean operator. (English summary) **2003g:26028**
Raïssouli, Mustapha (*with* Chergui, Mohamed) Arithmetico-geometric and geometrico-harmonic means of two convex functionals. (English summary) **2003d:47021**
— (*with* Leazizi, Fatima) Continued fraction expansion of the geometric matrix mean and applications. (English summary) **2003k:15033**
Rassias, Themistocles M. *see* **Kim, Young-Ho**, **2003f:39069**
Ruscheweyh, Stephan *see* **Alzer, Horst**, **2003h:30001**
Sándor, József *see* **Neuman, Edward**, **2003m:26035**
Scarmozzino, F. P. *see* **Dragomir, Sever Silvestru**, **2003b:26017**
Starc, Zdravko F. *see* **Čerin, Zvonko et al.**, **2003k:26022**
Stepanov, Vladimir D. *see* **Persson, Lars Erik**, **2003g:26028**
Trif, Tiberiu Sharp inequalities involving the symmetric mean. (English summary) **2003m:26036**
Tseng, Kuei-Lin *see* **Yu, Li-We et al.**, **2003m:26039**
Uchiyama, Mitsuru Criteria for monotonicity of operator means. (English summary) **2003k:47030**
Wang, Chung-Shin *see* **Yu, Li-We et al.**, **2003m:26039**
Wassell, Stephen R. Rediscovering a family of means. **2003e:01001**
Yu, Li-We (*with* Tseng, Kuei-Lin; Wang, Chung-Shin) Some generalizations of the inequalities about mean. (English summary) **2003m:26039**

26E99 None of the above, but in this section

Items with secondary classifications in 26E99

Mori, Takakazu Computabilities of Fine-continuous functions. (English summary) **2003a:03093**

28–XX Measure and integration {For analysis on manifolds, see 58–XX.}

28–00 General reference works (handbooks, dictionaries, bibliographies, etc.)

(Pap, Endre) *see* **Handbook: Measure theory**, **2003h:28001**

Items listed otherwise than by author

Handbook:
Measure theory ★ Handbook of measure theory. Vol. I, II. **2003h:28001**

28–01 Instructional exposition (textbooks, tutorial papers, etc.)

Bauer, Heinz ★ Measure and integration theory. (English summary) **2003a:28001**
(Burckel, Robert B.) *see* **Bauer, Heinz**, **2003a:28001**
Rana, Inder K. ★ An introduction to measure and integration. (English summary) **2003f:28001**
Väth, Martin ★ Integration theory. (English summary) **2003m:28001**

Items with secondary classifications in 28–01

DiBenedetto, Emmanuele ★ Real analysis. (English summary) **2003d:00001**
Dudley, Richard M. ★ Real analysis and probability. (English summary) **2003h:60001**
Pugh, Charles Chapman ★ Real mathematical analysis. (English summary) **2003e:00005**

28–03 Historical (must also be assigned at least one classification number from Section 01)

Mawhin, Jean L'éternel retour des sommes de Riemann-Stieltjes dans l'évolution du calcul intégral. (English summary) [The eternal return of Riemann-Stieltjes sums in the evolution of the integral calculus] **2003e:28001**

Items with secondary classifications in 28–03

Chatterji, S. D. Hausdorff als Maßtheoretiker. (German summary) [Hausdorff as measure theorist] **2003j:01023**
(Fan, Ai Hua) *see* **Kahane, Jean-Pierre**, **2003d:01027b**
(Hausdorff, Felix) *see* **Chatterji, S. D.**, **2003j:01023**
Hykšová, Magdalena Fractals and their object-oriented definition. (Czech) (*see* **2003b:01003**)
Kahane, Jean-Pierre Naissance et postérité de l'integrale de Lebesgue. [Origins and legacy of the Lebesgue integral] **2003d:01027a**
— Birth and legacy of the Lebesgue integral. (Chinese. English summary) **2003d:01027b**
— Birth and legacy of the Lebesgue integral. (Italian)
(Riesz, F.) *see* **Žitný, Karel**, (**2003b:01002**)
Šarmanová, Petra *see* **Schwabik, Štefan**, **2003c:01005**
Schwabik, Štefan (*with* Šarmanová, Petra) ★ Malý průvodce historií integrálu. (Czech) [A brief guide to the history of the integral] **2003c:01005**
Žitný, Karel The contribution of F. Riesz to the theory of the Lebesgue integral of a function of one real variable. (Czech) (*see* **2003b:01002**)

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Biography:
Hausdorff, Felix *see* **Chatterji, S. D.**, **2003j:01023**

28–06 Proceedings, conferences, collections, etc.

(Barnsley, Michael F.) *see* **Fractals in multimedia**, **2003j:28001**
(Booker, Jane M.) *see* **Fuzzy logic and probability applications**, **2003i:28001**
(Parkinson, W. Jerry) *see* **Fuzzy logic and probability applications**, **2003i:28001**
(Ross, Timothy J.) *see* **Fuzzy logic and probability applications**, **2003i:28001**
(Saupe, Dietmar) *see* **Fractals in multimedia**, **2003j:28001**
(Vrscay, Edward R.) *see* **Fractals in multimedia**, **2003j:28001**

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Fractals in multimedia ★ Fractals in multimedia. **2003j:28001**
Fuzzy logic and probability applications ★ Fuzzy logic and probability applications. **2003i:28001**
Minneapolis, MN ★ Fractals in multimedia. **2003j:28001**

Items with secondary classifications in 28–06

(Maass, Alejandro) *see* **Dynamics and randomness**, **2003m:37003**
(Martínez, Servet A.) *see* **Dynamics and randomness**, **2003m:37003**
(Pap, Endre) *see* **Handbook: Measure theory**, **2003h:28001**
(San Martín, Jaime) *see* **Dynamics and randomness**, **2003m:37003**

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Conference:
Fuzzy Sets Theory and its Applications ★ Operations for uncertainty modelling.
Dynamics and randomness ★ Dynamics and randomness. **2003m:37003**
Handbook:
Measure theory ★ Handbook of measure theory. Vol. I, II. **2003h:28001**
Liptovsky Mikulas ★ Operations for uncertainty modelling.
Operations for uncertainty modelling ★ Operations for uncertainty modelling.
Santiago ★ Dynamics and randomness. **2003m:37003**

28Axx Classical measure theory

28A05 Classes of sets (Borel fields, σ-rings, etc.), measurable sets, Suslin sets, analytic sets [see also 03E15, 26A21, 54H05]

Agbeko, N. Kwami Mapping bijectively σ-algebras onto power sets. (English summary) **2003a:28002**
Appell, Jürgen (*with* D'Aniello, Emma; Väth, Martin) Some remarks on small sets. (English summary) **2003d:28001**
Chentsov, Aleksandr Georgievich On measurable spaces that admit non-Dirac countably additive $(0, 1)$-measures. (Russian)
Cichoń, Jacek (*with* Jasiński, Andrzej) A note on complex unions of subsets of the real line. (English summary) **2003f:28002**
— (*with* Szczepaniak, Przemysław) On almost invariant subsets of the real line. (English summary) **2003f:28003**
Ciesielski, Krzysztof² (*with* Fejzić, Hajrudin; Freiling, Chris) Measure zero sets with non-measurable sum. (English summary) **2003f:28004**
D'Aniello, Emma *see* **Appell, Jürgen et al.**, **2003d:28001**
Fast, H. On intersections of small perfect sets. (English summary) **2003m:28002**
Fejzić, Hajrudin *see* **Ciesielski, Krzysztof² et al.**, **2003f:28004**
Freiling, Chris *see* **Ciesielski, Krzysztof² et al.**, **2003f:28004**
Fremlin, David H. Sets determined by few coordinates. (English summary) **2003d:28002**
Hejduk, Jacek (*with* Lindner, Sebastian) On the Hashimoto topology with respect to an extension of the Lebesgue measure. (English summary) **2003j:28002**
Jasiński, Andrzej *see* **Cichoń, Jacek**, **2003f:28002**
Kłopotowski, A. (*with* Nadkarni, M. G.; Sarbadhikari, H.; Srivastava, S. M.) Sets with doubleton sections, good sets and ergodic theory. (English summary) **2003g:28001**
Kumar Sinha, Ajay An example of Cantor's set.
Laczkovich, Miklós A Ramsey theorem for measurable sets. (English summary) **2003f:28005**
Lindner, Sebastian *see* **Hejduk, Jacek**, **2003j:28002**
Mauldin, R. Daniel (*with* Yingst, Andrew Q.) Comments about the Steinhaus tiling problem. (English summary) **2003k:28001**
Mera, M. E. (*with* Morán, Manuel; Preiss, David; Zajíček, Luděk) Porosity, σ-porosity and measures. (English summary) **2003m:28003**
Morán, Manuel *see* **Mera, M. E. et al.**, **2003m:28003**
Nadkarni, M. G. *see* **Kłopotowski, A. et al.**, **2003g:28001**
Preiss, David *see* **Mera, M. E. et al.**, **2003m:28003**
Sarbadhikari, H. *see* **Kłopotowski, A. et al.**, **2003g:28001**
Srivastava, S. M. *see* **Kłopotowski, A. et al.**, **2003g:28001**
Szczepaniak, Przemysław *see* **Cichoń, Jacek**, **2003f:28003**
Väth, Martin *see* **Appell, Jürgen et al.**, **2003d:28001**
Wagner-Bojakowska, Elżbieta (*with* Wilczyński, Władysław) The union of ψ-density topologies. **2003k:28002**
Wilczyński, Władysław *see* **Wagner-Bojakowska, Elżbieta**, **2003k:28002**
Ye, Sheng Closed sets and similar containing relation on the real spaces. (English and Chinese summaries) **2003e:28002**
Yingst, Andrew Q. *see* **Mauldin, R. Daniel**, **2003k:28001**
Zaitov, A. A. The Suslin number of the unit ball of measures with alternating signs. (Russian. English and Uzbek summaries) **2003j:28003**
Zajíček, Luděk *see* **Mera, M. E. et al.**, **2003m:28003**
Zakharov, Valeriĭ Konstantinovich Classification of Borel sets and functions in the general case. (Russian) **2003j:28004**

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Appell, Jürgen "Small" sets and operators in functional analysis. (Italian. English summary) **2003g:26004**
Bouziad, A. Coincidence of the upper Kuratowski topology with the co-compact topology on compact sets, and the Prohorov property. (English summary) **2003f:54019**
Cabrelli, Carlos A. (*with* Hare, Kathryn E.; Molter, Ursula M.) Sums of Cantor sets yielding an interval. (English summary) **2003j:28024**
Delaware, Richard Sets whose Hausdorff measure equals method I outer measure. (English summary) **2003h:28009**
Diers, Yves Topological geometrical categories. (English summary) **2003e:18005**
Ganguly, D. K. (*with* das Gupta, Maitreyee) On certain properties of sets with Baire property. (English summary) **2003f:54066**
Gorbul'skiĭ, A. An example of the interpolation of the standard sequence of measurable partitions with large scaling entropy. (Russian. English and Russian summaries) **2003k:28023**
Grinblat, L. Š. ★ Algebras of sets and combinatorics. (English summary) **2003m:03073**
das Gupta, Maitreyee *see* **Ganguly, D. K.**, **2003f:54066**
Hare, Kathryn E. *see* **Cabrelli, Carlos A. et al.**, **2003j:28024**
Holický, Petr (*with* Komínek, Václav) On projection of nonseparable Souslin and Borel sets along separable spaces. (English summary) **2003c:54070**
Ĭl'kīv, V. S. Analogues of Pyartli's lemma with absolute constants. (Ukrainian. English, Russian and Ukrainian summaries) **2003m:26014**
Kanovei, Vladimir (*with* Reeken, Michael) New Radon-Nikodym ideals. (English summary) **2003g:03071**
Keleti, Tamás Density and covering properties of intervals of $\mathbb{R}^n$. (English summary) **2003g:28011**
Komínek, Václav *see* **Holický, Petr**, **2003c:54070**
Kraszewski, Jan Properties of ideals on the generalized Cantor spaces. (English summary) **2003a:03070**
Mauldin, R. Daniel Some problems in set theory, analysis and geometry. (English summary) **2003j:03060**
Mittag, Barry B. Outer measures and separation properties of lattices. (English summary) **2003h:28003**
Mohseni Moghadam, M. Topics on the porosity. (English summary) **2003j:54027**
Molter, Ursula M. *see* **Cabrelli, Carlos A. et al.**, **2003j:28024**
Nowik, Andrzej Possibly there is no uniformly completely Ramsey null set of size 2^{ω}. (English summary) **2003j:03057**

Raja, M. On some class of Borel measurable maps and absolute Borel topological spaces. (English summary) **2003e:54038**
Reeken, Michael *see* **Kanovei, Vladimir**, **2003g:03071**
(Shelah, Saharon) *see* **Grinblat, L. Š.**, **2003m:03073**
(Stoyanovskiĭ, A.) *see* **Grinblat, L. Š.**, **2003m:03073**
Vlad, Carmen D. On prime complete lattices, support of measures and the Wallman remainder. (English summary) **2003h:28004**
Wroński, Stanisław Marczewski operation can be iterated few times. (English summary) **2003g:03073**
Zajíček, Luděk An unpublished result of P. Šleich: sets of type $H^{(s)}$ are σ-bilaterally porous. (English summary) **2003c:42008**
Zakharov, Valeriĭ Konstantinovich Classification of Borel sets and functions for an arbitrary space. (Russian) **2003k:26007**
Żeberski, Szymon Nonstandard proofs of Eggleston like theorems. (English summary) **2003d:03076**

28A10 Real- or complex-valued set functions

Girotto, Bruno (*with* Holzer, Silvano) Convergence in distribution of bounded monotone set functions on the real line. (English summary) **2003m:28004**
Grabisch, Michel Set functions over finite sets: transformations and integrals. **2003j:28005**
Holzer, Silvano *see* **Girotto, Bruno**, **2003m:28004**
Liu, Ke *see* **Zhang, Qiang[2]**, **2003k:28003**
Villanueva Díez, Ignacio Some results concerning polymeasures. (English summary) **2003b:28001**
Zhang, Qiang[2] (*with* Liu, Ke) Decompositions of revised monotone signed fuzzy measures. (English summary) **2003k:28003**

Items with secondary classifications in 28A10

Ban, Adrian I. (*with* Gal, Sorin G.) ★ Defects of properties in mathematics. (English summary) **2003b:00001**
Diatta, Jean A mixed measure of content on the set of real numbers. (English summary) **2003m:28005**
Gal, Sorin G. *see* **Ban, Adrian I.**, **2003b:00001**

28A12 Contents, measures, outer measures, capacities

Alvarez-Manilla, Mauricio Extension of valuations on locally compact sober spaces. (English summary) **2003g:28002**
Ambrosio, Luigi Fine properties of sets of finite perimeter in doubling metric measure spaces. (English summary) **2003i:28002**
Aversa, V. (*with* Bhaskara Rao, K. P. S.) Kelley's theorem from the duality of LP and Tychonoff's theorem. (English summary) **2003j:28006**
Bhaskara Rao, K. P. S. *see* **Aversa, V.**, **2003j:28006**
Brown, Douglas K. (*with* Giusto, Mariagnese; Simpson, Stephen G.) Vitali's theorem and WWKL. (English summary) **2003a:28003**
Chentsov, Aleksandr Georgievich (*with* Morina, S. I.) On the extension of the length function in the class of finitely additive probabilities. (English summary) **2003k:28004**
De Simone, Anna (*with* Navara, Mirko) On the Yosida-Hewitt decomposition and Rüttimann decomposition of states. (English summary) **2003b:28002**
Diatta, Jean A mixed measure of content on the set of real numbers. (English summary) **2003m:28005**
(Erdős, Paul[1]) *see* **Maharam, D.**, **2003j:28010**
Faure, Claude-Alain A short proof of Lebesgue's density theorem. **2003c:28001**
Filipczak, Małgorzata (*with* Hejduk, Jacek) On some extensions of σ-finite measures. (English summary) **2003g:28003**
Giusto, Mariagnese *see* **Brown, Douglas K. et al.**, **2003a:28003**
Hare, Kathryn E. (*with* Roginskaya, Maria) A Fourier series formula for energy of measures with applications to Riesz products. (English summary) **2003g:28004**
Hejduk, Jacek *see* **Filipczak, Małgorzata**, **2003g:28003**
Janssen, Arnold A proof of the basic measure extension theorem of Carathéodory. (English summary) **2003j:28007**
Kim, Seunghwan *see* **Kim, Tae Sik**, **2003a:28004**
Kim, Tae Sik (*with* Kim, Seunghwan) Relations between dimensions and differentiability of curves. (English summary) **2003a:28004**
Kirchheim, Bernd (*with* Preiss, David) Uniformly distributed measures in Euclidean spaces. (English summary) **2003a:28005**
Lahiri, Benoy Kumar (*with* Lahiri, Indrajit) Vitali sets. (English summary) **2003j:28008**
Lahiri, Indrajit *see* **Lahiri, Benoy Kumar**, **2003j:28008**
Lipecki, Z. Sequences of generous and nonatomic quasi-measures on Boolean algebras. (English summary) **2003h:28002**
Maccheroni, Fabio (*with* Ruckle, William H.) BV as a dual space. (English summary) **2003j:28009**
Maharam, D. Paul Erdős and finitely additive measures. **2003j:28010**
Martellotti, Anna Finitely additive phenomena. **2003e:28003**
Mira López, Juan A. *see* **Mora Martínez, Gaspar**, **2003e:28004**
Mittag, Barry B. Outer measures and separation properties of lattices. (English summary) **2003h:28003**
Mora Martínez, Gaspar (*with* Mira López, Juan A.) A characterization of space-filling curves. (English and Spanish summaries) **2003e:28004**
Morina, S. I. *see* **Chentsov, Aleksandr Georgievich**, **2003k:28004**
Murofushi, Toshiaki *see* **Narukawa, Yasuo**
Narukawa, Yasuo (*with* Murofushi, Toshiaki) Representation of Choquet integral.
Navara, Mirko *see* **De Simone, Anna**, **2003b:28002**
Niculescu, Constantin P. Choquet theory for signed measures. (English summary) **2003f:28006**
Niizeki, Syôzô (*with* Oishi, Yutaka) On the convergence of sequence of sets and the continuity of measure. **2003a:28006**
Oishi, Yutaka *see* **Niizeki, Syôzô**, **2003a:28006**
Pap, Endre Pseudo-additive measures and their applications. **2003j:28011**
Ponnley, James Outer measures and lattice extensions. (English summary) **2003c:28002**
Preiss, David *see* **Kirchheim, Bernd**, **2003a:28005**
Rodríguez-Salinas, B. On the extension of measures. (English and Spanish summaries) **2003g:28005**
Roginskaya, Maria *see* **Hare, Kathryn E.**, **2003g:28004**
Ruckle, William H. *see* **Maccheroni, Fabio**, **2003j:28009**
Simpson, Stephen G. *see* **Brown, Douglas K. et al.**, **2003a:28003**
Sirbiladze, G. Choquet's capacities on the field of insufficient expert's data. (English summary)
Traina, Charles Lattice related outer measure inequalities on pairs of lattices. (English summary) **2003d:28003**
Vlad, Carmen D. Lattice-topological properties of Wallman spaces of σ-smooth zero-one valued measures. (English and French summaries) **2003k:28005**
— On prime complete lattices, support of measures and the Wallman remainder. (English summary) **2003h:28004**
Wilczyński, Władysław Problem concerning the Lebesgue density at a point. **2003m:28006**
Zaitov, A. A. Some properties of weakly additive functionals and of measures with alternating signs. (Russian. English and Uzbek summaries) **2003j:28012**

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Agbeko, N. Kwami Mapping bijectively σ-algebras onto power sets. (English summary) **2003a:28002**
Asai, Nobuhiro (*with* Kubo, Izumi; Kuo, Hui-Hsiung) Segal-Bargmann transforms of one-mode interacting Fock spaces associated with Gaussian and Poisson measures. (English summary) **2003j:46099**
Ban, Adrian I. (*with* Gal, Sorin G.) On the defect of complementarity of fuzzy measures. (English summary) **2003h:28030**
Bogachev, Vladimir I. (*with* Pugachëv, O. V.; Röckner, Michael) Surface measures and tightness of Sobolev capacities on a Poisson space. (Russian)
— (*with* Pugachëv, O. V.; Röckner, Michael) Surface measures and tightness of (r, p)-capacities on Poisson space. (English summary) **2003i:58020**
Bricchi, Michele Existence and properties of h-sets. (English summary) **2003d:28007**
Cerasoli, Mauro (*with* Fedullo, Aniello) The inclusion-exclusion principle. (English summary) **2003k:60017**
Chentsov, Aleksandr Georgievich (*with* Morina, S. I.) ★ Extensions and relaxations. (English summary) **2003m:49001**
— On measurable spaces that admit non-Dirac countably additive (0, 1)-measures. (Russian)
— On the construction of correct extensions in the class of finitely additive measures. (Russian) **2003c:49016**
Delaware, Richard Sets whose Hausdorff measure equals method I outer measure. (English summary) **2003h:28009**
Denneberg, Dieter Conditional expectation for monotone measures, the discrete case. (English summary) **2003e:91046**
Fedullo, Aniello *see* **Cerasoli, Mauro**, **2003k:60017**
Feng, De-Jun Comparing packing measures to Hausdorff measures on the line. (English summary) **2003e:28011**
Gal, Sorin G. *see* **Ban, Adrian I.**, **2003h:28030**
Habil, Eissa D. (*with* Radwan, Akram M.) Decomposition of measures on difference posets. (English summary) **2003f:46064**
Heilpern, Stanisław Using Choquet integral in economics. (English summary) **2003a:91039**
Hejduk, Jacek (*with* Lindner, Sebastian) On the Hashimoto topology with respect to an extension of the Lebesgue measure. (English summary) **2003j:28002**
Jamison, K. David (*with* Lodwick, Weldon A.) The construction of consistent possibility and necessity measures. (English summary) **2003j:28040**
Järvenpää, Esa (*with* Järvenpää, Maarit; Mauldin, R. Daniel) Deterministic and random aspects of porosities. (English summary) **2003j:28028**
Järvenpää, Maarit *see* **Järvenpää, Esa et al.**, **2003j:28028**
Jovanović, Aleksandar Real valued measurability, some set-theoretic aspects. **2003k:03064**
Kubo, Izumi *see* **Asai, Nobuhiro et al.**, **2003j:46099**
Kuo, Hui-Hsiung *see* **Asai, Nobuhiro et al.**, **2003j:46099**
Li, Jun[4] Order continuous of monotone set function and convergence of measurable functions sequence. (English summary) **2003j:28041**
Lindner, Sebastian *see* **Hejduk, Jacek**, **2003j:28002**
Liu, Ke *see* **Zhang, Qiang[2]**, **2003j:28042** *and* **2003k:28003**
Lodwick, Weldon A. *see* **Jamison, K. David**, **2003j:28040**
Ma, Dong Kui (*with* Xu, Zhi Ting) A note on Hausdorff measures of Sierpinski carpets. (English summary) **2003a:28010**
Martínez-Avendaño, Rubén A. (*with* Yuditskii, P.) Non-compact λ-Hankel operators. (English summary) **2003m:47048**
Mauldin, R. Daniel *see* **Järvenpää, Esa et al.**, **2003j:28028**
Mera, M. E. (*with* Morán, Manuel; Preiss, David; Zajíček, Luděk) Porosity, σ-porosity and measures. (English summary) **2003m:28003**
Miller, H. I. (*with* Orhan, C.) On almost convergent and statistically convergent subsequences. (English summary) **2003k:40001**
Morán, Manuel *see* **Mera, M. E. et al.**, **2003m:28003**
Morina, S. I. *see* **Chentsov, Aleksandr Georgievich**, **2003m:49001**
Orhan, C. *see* **Miller, H. I.**, **2003k:40001**
Pap, Endre σ-null-additive set functions. (English summary) **2003j:28034**
Piriyakumar, J. Earnest Lazarus (*with* Renganathan, N.) Some standard inequalities of fuzzy random variables. (English summary) **2003d:28026**
— (*with* Renganathan, N.) Some results on independent fuzzy random variables. (English summary) **2003d:28027**
Preiss, David *see* **Mera, M. E. et al.**, **2003m:28003**
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28A15 Abstract differentiation theory, differentiation of set functions [see also 26A24]

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28A20 Measurable and nonmeasurable functions, sequences of measurable functions, modes of convergence

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28A25 Integration with respect to measures and other set functions

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28A33 Spaces of measures, convergence of measures [see also 46E27, 60Bxx]

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28A35 Measures and integrals in product spaces

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28A50 Integration and disintegration of measures

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28A51 Lifting theory [see also 46G15]

Macheras, N. D. (*with* Strauss, Werner) On strong product liftings. (English summary) **2003f:28007**
— (*with* Musiał, K.; Strauss, Werner) Strong admissibly generated liftings and products of liftings. (English summary) **2003i:28004**
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Macheras, N. D. (*with* Strauss, Werner) One-sided Fubini formulas. (English summary) **2003m:28009**
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28A60 Measures on Boolean rings, measure algebras [see also 54H10]

Ferrando, Juan Carlos On sets of density zero. (English summary) **2003g:28010**

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28A75 Length, area, volume, other geometric measure theory [see also 26B15, 49Q15]

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Barański, Krzysztof On the complexification of the Weierstrass non-differentiable function. (English summary) **2003e:26008**
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Feng, De-Jun Comparing packing measures to Hausdorff measures on the line. (English summary) **2003e:28011**
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28A78 Hausdorff and packing measures

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28A99 None of the above, but in this section

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28Bxx Set functions, measures and integrals with values in abstract spaces

28B05 Vector-valued set functions, measures and integrals [see also 46G10]

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28B10 Group- or semigroup-valued set functions, measures and integrals

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28B15 Set functions, measures and integrals with values in ordered spaces

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28B20 Set-valued set functions and measures; integration of set-valued functions; measurable selections [see also 26E25, 54C60, 54C65, 91B14]

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28Cxx Set functions and measures on spaces with additional structure [see also 46G12, 58C35, 58D20]

28C05 Integration theory via linear functionals (Radon measures, Daniell integrals, etc.), representing set functions and measures

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28C10 Set functions and measures on topological groups, Haar measures, invariant measures [see also 22Axx, 43A05]

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28D05 Measure-preserving transformations

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28Exx Miscellaneous topics in measure theory

28E05 Nonstandard measure theory [see also 03H05, 26E35]

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28E10 Fuzzy measure theory [see also 03E72, 26E50, 94D05]

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— (*with* Wu, Yong Hong; Lu, Jie[2]) Lattice-valued Zp-pan-integrals. II. For lattice-valued Borel functions on lattice. (English summary) **2003c:28023**
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Zhang, Qiang[2] (*with* Liu, Ke) Lebesgue decompositions of non-additive set functions. (Chinese. English and Chinese summaries) **2003j:28042**
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Bertoluzza, Carlo *see* **Montes Rodríguez, Susana et al.**, 2003d:94039 *and* **Statistical modeling, analysis and management of fuzzy data**, 2003f:60008
Chang, Jia-Ruey *see* **Tzeng, Gwo-Hshiung et al.**
Chen, Weida *see* **Jian, Lirong et al.**, 2003k:68108
de Cooman, Gert (*with* Walley, Peter) A possibilistic hierarchical model for behaviour under uncertainty. (English summary) **2003j:91036**
Couso Blanco, Inés (*with* Delgado, Miguel; Martín-Bautista, M. J.; Sánchez, Daniel; Vila, M. A.) Quantifier guided aggregation of fuzzy criteria with associated importances. (English summary) (*see* **2003e:00026**)
— *see also* **Miranda, Enrique et al.**, 2003b:03075 *and* **Montes Rodríguez, Susana et al.**, 2003d:94039
Criado, Francisco (*with* Gachechiladze, T.; Meladze, Gamlet; Tsertsradze, G.) The bag model in language statistics. (English summary) **2003j:68134**
Crocetto, Nicola A defuzzification method for the localization of the gross errors in the observations. (English summary)
Da, Qing Li *see* **Jian, Lirong et al.**, 2003k:68108
Dabbous, T. E. Fuzzy optimal control for bilinear stochastic systems with fuzzy parameters. (English summary) **2003c:93058**
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Denneberg, Dieter Conditional expectation for monotone measures, the discrete case. (English summary) **2003e:91046**
(Domingo-Ferrer, Josep) *see* **Aggregation and security assessment for inference control in statistical databases**
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Fang, Jin-Xuan A note on the convergence theorem of generalized fuzzy integrals. (English summary) **2003b:26022**
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Klir, George J. Measures of uncertainty and information. (English summary) (*see* **2003g:03091**)
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Pap, Endre Aggregation operators in engineering design. (English summary) (*see* **2003e:00026**)
— Pseudo-additive measures and their applications. **2003j:28011**
— σ-null-additive set functions. (English summary) **2003j:28034**
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(Ralescu, Dan A.) *see* **Statistical modeling, analysis and management of fuzzy data**, 2003f:60008
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Sirbiladze, G. Choquet's capacities on the field of insufficient expert's data. (English summary)
(Torra, Vicenç) *see* **Aggregation and security assessment for inference control in statistical databases**
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Vila, M. A. *see* **Couso Blanco, Inés et al.**, (**2003e:00026**)
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Wu, Cheng[3] *see* **Li, Fa Chao et al.**
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Zhang, Bokan On integrals of n-dimensional fuzzy-number-valued functions. (English summary) **2003b:26024**
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Conference:
Fuzzy Sets Theory and its Applications ★ Operations for uncertainty modelling.
Liptovsky Mikulas ★ Operations for uncertainty modelling.
Operations for uncertainty modelling ★ Operations for uncertainty modelling.
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28E15 Other connections with logic and set theory

Dubois, Didier (*with* Prade, Henri) Qualitative possibility functions and integrals. (English summary) **2003j:28043**
Laczkovich, Miklós Paradoxes in measure theory. **2003j:28044**
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Buhrman, Harry (*with* Longpré, Luc) Compressibility and resource bounded measure. (English summary) **2003c:68078**
Frič, Roman Łukasiewicz tribes are absolutely sequentially closed bold algebras. (English summary) **2003i:28022**
Longpré, Luc *see* **Buhrman, Harry**, **2003c:68078**
Nowik, Andrzej On some properties of the class of real functions with λ and λ' graphs. (English summary) **2003m:03075**
— On Borel version of uniformly completely Ramsey sets. (English summary) **2003c:03086**
— Possibly there is no uniformly completely Ramsey null set of size 2^{ω}. (English summary) **2003j:03057**
— (*with* Weiss, Tomasz) On the Ramseyan properties of some special subsets of 2^{ω} and their algebraic sums. (English summary) **2003c:03087**
Sardella, Mirko (*with* Ziliotti, Guido) What's the price of a nonmeasurable set? (English summary) **2003b:28003**
Terwijn, Sebastiaan A. On the quantitative structure of Δ^0_2. (English summary) **2003c:03073**
Weiss, Tomasz *see* **Nowik, Andrzej**, **2003c:03087**
Ziliotti, Guido *see* **Sardella, Mirko**, **2003b:28003**

28E99 None of the above, but in this section

Items with secondary classifications in 28E99

Kerre, Etienne E. *see* **Zhang, Guang Quan et al.**, **2003b:06010**
Teo, Kok Lay *see* **Zhang, Guang Quan et al.**, **2003b:06010**
Wu, Yong Hong *see* **Zhang, Guang Quan et al.**, **2003b:06010**
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30–XX Functions of a complex variable {For analysis on manifolds, see 58–XX.}

30–00 General reference works (handbooks, dictionaries, bibliographies, etc.)

(Kühnau, Reiner) *see* **Handbook: Complex analysis: geometric function theory**, **2003j:30001**

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Handbook:
Complex analysis: geometric function theory ★ Handbook of complex analysis: geometric function theory. Vol. 1. **2003j:30001**

30–01 Instructional exposition (textbooks, tutorial papers, etc.)

Bonk, Mario Singular surfaces and meromorphic functions.
Bradford, Russell (*with* Corless, Robert M.; Davenport, James H.; Jeffrey, David J.; Watt, Stephen M.) Reasoning about the elementary functions of complex analysis. (English summary) **2003m:30001**
Corless, Robert M. *see* **Bradford, Russell et al.**, **2003m:30001**
Davenport, James H. *see* **Bradford, Russell et al.**, **2003m:30001**
Greene, Robert E. (*with* Krantz, Steven G.) ★ Function theory of one complex variable. (English summary) **2003e:30001**
Jeffrey, David J. *see* **Bradford, Russell et al.**, **2003m:30001**
Krantz, Steven G. *see* **Greene, Robert E.**, **2003e:30001**
Liu, Shi Qiang *see* **Lu, Jian Ke et al.**, **2003m:30002**
Lu, Jian Ke (*with* Zhong, Shou Guo; Liu, Shi Qiang) ★ Introduction to the theory of complex functions. **2003m:30002**
Moskowitz, Martin A. ★ A course in complex analysis in one variable. (English summary)
Watt, Stephen M. *see* **Bradford, Russell et al.**, **2003m:30001**
Zhong, Shou Guo *see* **Lu, Jian Ke et al.**, **2003m:30002**

Items with secondary classifications in 30–01

Burkill, H. *see* **Burkill, J. C.**
Burkill, J. C. (*with* Burkill, H.) ★ A second course in mathematical analysis.
Clemens, Herbert ★ A scrapbook of complex curve theory. **2003m:14001**
Gussi, G. ★ Topics in analysis and distribution theory. **2003e:46001**

30–02 Research exposition (monographs, survey articles)

Iwaniec, Tadeusz (*with* Martin, Gaven J.) ★ Geometric function theory and non-linear analysis. **2003c:30001**
Martin, Gaven J. *see* **Iwaniec, Tadeusz**, **2003c:30001**
Mel′nikov, M. S. The saga of the Painlevé problem and of analytic capacity. (Russian. Russian summary) **2003a:30001**
Olariu, Silviu ★ Complex numbers in N dimensions. **2003j:30002**
Vasil′ev, A. Yu. ★ Moduli of families of curves for conformal and quasiconformal mappings. **2003j:30003**

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Lecture Notes in Mathematics *see* **Vasil′ev, A. Yu.**, **2003j:30003**

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Betsakos, Dimitrios Geometric theorems and problems for harmonic measure. (English summary) **2003c:31001**
Driscoll, Tobin A. (*with* Trefethen, Lloyd N.) ★ Schwarz-Christoffel mapping. (English summary) **2003e:30012**
(Hedenmalm, Håkan) *see* **Shimorin, Sergei**
(Korenblum, Boris) *see* **Shimorin, Sergei**
Obolashvili, Elena ★ Higher order partial differential equations in Clifford analysis. (English summary) **2003m:30097**
Ostrovskii, I. V. On zero distribution of sections and tails of power series. **2003c:30006**
Sendov, Blagovest On the Hausdorff geometry of polynomials, a generalized conjecture. **2003h:30009**
Shimorin, Sergei A review of *Theory of Bergman spaces* [Springer, New York, 2000; MR 2001c:46043] by H. Hedenmalm, B. Korenblum and Z. Zhu. (Russian)
Trefethen, Lloyd N. *see* **Driscoll, Tobin A.**, **2003e:30012**
(Zhu, Kehe) *see* **Shimorin, Sergei**

30–03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 30–03

(Ahlfors, Lars Valerian) *see* **Fernández Pérez, José Luis**, **2003k:01016**
Andersen, Kirsti Wessel's work on complex numbers and its place in history. (*see* **2003j:01010**)
Bekken, Otto B. Viète's generation of triangles. **2003j:01006**
Ermolaeva, N. S. G. A. Thieme and his role in spreading Riemann's ideas in St. Petersburg. (Russian. English summary) **2003i:01022**
Fernández Pérez, José Luis Ahlfors: the first Fields Medal. (Spanish) **2003k:01016**
Jakubowski, Zbigniew J. Some reflections concerning bounded univalent functions. (Polish. English summary) **2003j:30032**
Takase, Masahito Gauss' *Disquisitiones arithmeticae* and Hilbert's 12th problem. (Japanese)
(Time, G. A.) *see* **Ermolaeva, N. S.**, **2003i:01022**
Wessel, Caspar On the analytical representation of direction. An attempt applied chiefly to solving plane and spherical polygons. (*see* **2003j:01010**)
— *see also* **Andersen, Kirsti**, (**2003j:01010**)

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Biography:
Ahlfors, Lars Valerian *see* **Fernández Pérez, José Luis**, **2003k:01016**
Time, Georgiĭ Avgustovich *see* **Ermolaeva, N. S.**, **2003i:01022**

30–04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 30–04

Cherry, William A. (*with* Wang, Julie Tzu-Yueh) Uniqueness polynomials for entire functions. (English summary) **2003d:30033**
Driscoll, Tobin A. (*with* Trefethen, Lloyd N.) ★ Schwarz-Christoffel mapping. (English summary) **2003e:30012**
Soto Munguía, José Luis A graphical exploration of the properties of Möbius transforms. (Spanish. Spanish summary) **2003d:30057**
Trefethen, Lloyd N. *see* **Driscoll, Tobin A.**, **2003e:30012**
Wang, Julie Tzu-Yueh *see* **Cherry, William A.**, **2003d:30033**

30–06 Proceedings, conferences, collections, etc.

(Aksent′ev, L. A.) *see* **Geometric theory of functions, boundary value problems and their applications**, **2003k:30001**
(Cherry, William A.) *see* **Value distribution theory and complex dynamics**, **2003g:30001**
(Elizarov, A. M.) *see* **Geometric theory of functions, boundary value problems and their applications**, **2003k:30001**
(Nasyrov, S. R.) *see* **Geometric theory of functions, boundary value problems and their applications**, **2003k:30001**
(Yang, Chung-Chun) *see* **Value distribution theory and complex dynamics**, **2003g:30001**

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Contemporary Mathematics ★ Value distribution theory and complex dynamics. **2003g:30001**
Geometric theory of functions, boundary value problems and their applications ★ Геометрическая теория функций, краевые задачи и их приложения. (Russian) [Geometric function theory, boundary value problems and their applications] **2003k:30001**
Hong Kong ★ Value distribution theory and complex dynamics. **2003g:30001**
Inequalities in univalent function theory and their applications ★ Tan'yō kansū ron ni okeru kusagusa no futōshiki to so no ōyō. [Inequalities in univalent function theory and their applications]
Kazan′ ★ Геометрическая теория функций, краевые задачи и их приложения. (Russian) [Geometric function theory, boundary value problems and their applications] **2003k:30001**
Value distribution theory and complex dynamics ★ Value distribution theory and complex dynamics. **2003g:30001**

Items with secondary classifications in 30–06

(Earle, Clifford J.) *see* **Complex manifolds and hyperbolic geometry**, **2003f:00020**
(Harvey, William J.) *see* **Complex manifolds and hyperbolic geometry**, **2003f:00020**
(Kühnau, Reiner) *see* **Handbook: Complex analysis: geometric function theory**, **2003j:30001**
Morimoto, Mitsuo Generalized functions on the sphere and heat functions. (English summary) **2003d:30064**
(Recillas-Pishmish, Sevín) *see* **Complex manifolds and hyperbolic geometry**, **2003f:00020**

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Complex manifolds and hyperbolic geometry ★ Complex manifolds and hyperbolic geometry. **2003f:00020**
Congress:
Geometry ★ Complex manifolds and hyperbolic geometry. **2003f:00020**
Contemporary Mathematics ★ Complex manifolds and hyperbolic geometry. **2003f:00020**
Guanajuato ★ Complex manifolds and hyperbolic geometry. **2003f:00020**
Handbook:
Complex analysis: geometric function theory ★ Handbook of complex analysis: geometric function theory. Vol. 1. **2003j:30001**

30Axx General properties

30A05 Monogenic properties of complex functions (including polygenic and areolar monogenic functions)

Rozgonyi, T. (*with* Tar, M.) Conditions of analyticity for functions of one complex variable. (English summary) **2003m:30003**
Tar, M. *see* **Rozgonyi, T.**, **2003m:30003**

Items with secondary classifications in 30A05

Khavinson, Dmitry (*with* Świątek, Grzegorz) On the number of zeros of certain harmonic polynomials. (English summary) **2003j:30015**
Świątek, Grzegorz *see* **Khavinson, Dmitry**, **2003j:30015**

30A10 Inequalities in the complex domain

Alzer, Horst (*with* Ruscheweyh, Stephan) The arithmetic mean-geometric mean inequality for complex numbers. (English summary) **2003h:30001**
Avkhadiev, F. G. (*with* Wirths, Karl-Joachim) Schwarz-Pick inequalities for derivatives of arbitrary order. (English summary) **2003k:30002**
Grinshpan, A. Z. Inequalities generated by the gamma function. (English summary) **2003g:30002**

Reich, Edgar On the L^1 approximation of $|f(z)|$ by $\operatorname{Re} f(z)$ for analytic functions. (English summary) **2003g:30003**
Ruscheweyh, Stephan *see* **Alzer, Horst, 2003h:30001**
Wirths, Karl-Joachim *see* **Avkhadiev, F. G., 2003k:30002**

Items with secondary classifications in 30A10

D'Angelo, John P. ★ Inequalities from complex analysis. (English summary) **2003e:32001**
Milovanović, Gradimir V. (*with* Rassias, Themistocles M.) Inequalities for polynomial zeros. (English summary) **2003b:26010**
Owa, Shigeyoshi (*with* Srivastava, Hari M.) Some generalized convolution properties associated with certain subclasses of analytic functions. (English summary) **2003f:30020**
Rassias, Themistocles M. *see* **Milovanović, Gradimir V., 2003b:26010**
Srivastava, Hari M. *see* **Owa, Shigeyoshi, 2003f:30020**
Sugawa, Toshiyuki Estimates of hyperbolic metric with applications to Teichmüller spaces. (English summary) **2003g:30084**

30Bxx Series expansions

30B10 Power series (including lacunary series)

Alzugaray, Maria Teresa On the proximate order of growth of generating functions of Pólya frequency sequences. (English summary) **2003j:30004**
Beardon, Alan F. Even and odd entire functions. (English summary) **2003i:30001**
Filevich, Petro On the slow growth of power series convergent in the unit disk. (English and Russian summaries) **2003j:30005**
Gao, Zong Sheng (*with* Sun, Dao Chun; Wang, Min) On the rearrangements of the coefficients of two power series. (Chinese. English and Chinese summaries) **2003c:30002**
Gharibyan, T. L. (*with* Martirosyan, V. A.) Radial boundary values of analytic functions representable by lacunary power series. (Russian. English and Russian summaries) **2003b:30001**
Gologan, Radu-Nicolae An elementary proof of a theorem of Bernstein. (English summary) **2003b:30002**
Luh, Wolfgang (*with* Martirosyan, V. A.; Müller, Jürgen[3]) Restricted T-universal functions. (English summary) **2003d:30001**
Manstavičius, Eugenijus An estimate for the Taylor coefficients. (Lithuanian summary) **2003e:30002**
Martirosyan, V. A. *see* **Gharibyan, T. L., 2003b:30001** *and* **Luh, Wolfgang et al., 2003d:30001**
Müller, Jürgen[3] *see* **Luh, Wolfgang et al., 2003d:30001**
Puchta, Jan-Christoph On Fabry's gap theorem. (English summary) **2003m:30004**
Sun, Dao Chun *see* **Gao, Zong Sheng et al., 2003c:30002**
Todorov, Pavel G. Errata: "Taylor series of the Pick function and the Loewner variation within the class S and applications" [Rostock. Math. Kolloq. No. 54 (2000), 91–99; MR 2001k:30003]. **Twomey, J. B.** Cesaro means and Dirichlet spaces of holomorphic functions. (English summary) **2003g:30004**
Vlachou, V. On some classes of universal functions. (English summary) **2003f:30001**
Wang, Min *see* **Gao, Zong Sheng et al., 2003c:30002**
Zheltukhina, Natalya On power series having sections with multiply positive coefficients. (English summary) **2003m:30005**

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Brietzke, Eduardo H. M. Monotonicity of coefficients of reciprocal power series. (English summary) **2003a:30003**
Flajolet, Philippe Singular combinatorics. (English summary) **2003k:05009**
Frerick, Leonhard (*with* Müller, Jürgen[3]; Wengenroth, Jochen) Prescribed derivatives of holomorphic functions. (English summary) **2003j:30051**
Goonatilake, Rohitha A probabilistic description of the three theorems of Hardy. (English summary) **2003g:60075**
Grahl, Jürgen Some applications of Cartan's theorem to normality and semiduality of gap power series. (English summary) **2003b:30040**
Jahedi, K. *see* **Yousefi, B., 2003b:47061**
Leindler, László Hardy-Littlewood-type inequalities and their factorized enhancement. (English summary) **2003e:26035**
Marcantognini, Stefania (*with* Morán, María Dolores; Octavio, Alfredo) On Nehari's problem for Wiener functions. (English and Spanish summaries) **2003a:47033**
Marotte, F. (*with* Zhang, Changgui) Multisommabilité des séries entières solutions formelles d'une équation aux q-différences linéaire analytique. [Multisummability of formal power series solutions of an analytic linear q-difference equation] **2003d:39031**
Morán, María Dolores *see* **Marcantognini, Stefania et al., 2003a:47033**
Müller, Jürgen[3] *see* **Frerick, Leonhard et al., 2003j:30051**
Octavio, Alfredo *see* **Marcantognini, Stefania et al., 2003a:47033**
Osler, Thomas J. (*with* Wright, Marcus) A tale of two series. **2003d:40001**
Peña, Carlos C. Elements of sequence algebras. (English summary) **2003e:46082**
Renelt, Heinrich Strip integral representations and Laurent expansions for solutions of Cauchy-Riemann systems. (Russian. Russian summary) **2003g:30087**
Saitoh, Saburou Representations of meromorphic functions in terms of Laurent expansions and partial boundary values. (English summary) **2003c:30026**
Wang, Tian-ming *see* **Zhao, Fang-zhen, 2003m:11027**
Wengenroth, Jochen *see* **Frerick, Leonhard et al., 2003j:30051**
Wright, Marcus *see* **Osler, Thomas J., 2003d:40001**
Yousefi, B. (*with* Jahedi, K.) Analytic structure of the Banach space of formal power series. (English summary) **2003b:47061**
Zhang, Changgui *see* **Marotte, F., 2003d:39031**
Zhao, Fang-zhen (*with* Wang, Tian-ming) A note on the integrity of certain series. (English and Chinese summaries) **2003m:11027**

30B20 Random power series

Guo, Ji Dong (*with* Liu, Pin) Random α-Bloch function. (English and Chinese summaries) **2003f:30002**
Liu, Pin *see* **Guo, Ji Dong, 2003f:30002**

Items with secondary classifications in 30B20

Zhou, Hong Xia The growth and value distribution of random Dirichlet series in the right half plane. (Chinese. English and Chinese summaries) **2003k:30008**

30B30 Boundary behavior of power series, over-convergence

Melas, Antonios D. (*with* Nestoridis, Vassili) On various types of universal Taylor series. (English summary) **2003b:30003**
Nestoridis, Vassili *see* **Melas, Antonios D., 2003b:30003**
Sons, L. R. (*with* Ye, Zhuan) A class of gap series with small growth in the unit disc. (English summary) **2003k:30003**
Vlachou, V. Coincidence of two classes of universal Laurent series. (English summary) **2003j:30006**
Ye, Zhuan *see* **Sons, L. R., 2003k:30003**

Items with secondary classifications in 30B30

Armitage, D. H. Universal overconvergence of polynomial expansions of harmonic functions. (English summary) [Improved Jacobi elliptic function method and its applications] **2003h:31004**
Vlachou, V. On some classes of universal functions. (English summary) **2003f:30001**

30B40 Analytic continuation

De Micheli, E. (*with* Viano, G. A.) Holomorphic extension associated with Fourier-Legendre expansions. (English summary) **2003c:30003**
Donaire, Juan Jesús Porosity of sets and the Zygmund class. (English summary) **2003h:30002**
Globevnik, Josip Holomorphic extensions from open families of circles. (English summary) **2003j:30007**
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Brück, Rainer (*with* Frerick, Leonhard) Holomorphic extensions of Whitney jets. (English summary) **2003m:46035**
Castagnino, Mario A. (*with* Id Betan, R.; Laura, R.; Liotta, R. J.) Quantum decay processes and Gamov states. (English summary) **2003f:81280**
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Goonatilake, Rohitha On analytic continuation of summability transforms. (English summary) **2003g:60074**
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Laura, R. *see* **Castagnino, Mario A. et al., 2003f:81280**
Liotta, R. J. *see* **Castagnino, Mario A. et al., 2003f:81280**
Mashreghi, Javad Extending functions in the model subspaces of $H^2(\mathbb{R})$ to $\mathbb{C}$. (English and Persian summaries) **2003i:30053**
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30B50 Dirichlet series and other series expansions, exponential series [see also 11M41, 42–XX]

Belous, T. I. *see* **Gaĭsin, A. M., 2003m:30006**
Bodnar, R. D. (*with* Skaskīv, O. B.) On the rate of convergence of partial sums of absolutely convergent Dirichlet series. (Ukrainian. English, Russian and Ukrainian summaries) **2003k:30004**
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Fedynyak, S. I. *see* **Sheremeta, Myroslav M., (2003b:00025)**
Forster, Brigitte On the relation between Fourier and Leont'ev coefficients with respect to the space $AC(\overline{D})$. (English summary) **2003i:30003**
Gaĭsin, A. M. (*with* Latypov, I. D.) Asymptotics of the logarithm of the maximal term of a modified Dirichlet series. (Russian) **2003k:30005**
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Noda, Yoji On the functional equation $f^n = \exp(P_1) + \cdots + \exp(P_m)$. II. (English summary) **2003m:30057**

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30B60 Completeness problems, closure of a system of functions

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Boivin, André (*with* Zhu, Changzhong) On the L^2-completeness of some systems of analytic functions. (English summary) **2003e:30003**

— (*with* Zhu, Changzhong) On the completeness of the system $\{z^{\tau_n}\}$ in L^2. (English summary) **2003h:30004**

Erdélyi, Tamás The "full Clarkson-Erdős-Schwartz theorem" on the closure of non-dense Müntz spaces. (English summary) **2003m:30008**

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Reemtsen, Rembert Frequency and magnitude response design approximation problems for nonlinear-phase nonrecursive digital filters. (English summary) **2003j:93052**

30B70 Continued fractions [see also 11A55, 40A15]

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Antonova, T. M. (*with* Bodnar, D. Ī.) Domains of convergence of branched continued fractions of a special type. (Ukrainian. Ukrainian summary) **2003h:30005**

Beardon, Alan F. Continued fractions, discrete groups and complex dynamics. (English summary) **2003m:30010**

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Beardon, Alan F. The Hillan-Thron theorem in higher dimensions. (English summary) **2003m:40007**

Bodnar, D. Ī. (*with* Dmitrishin, R. Ī.) On the convergence of multidimensional g-fraction. (English and Russian summaries) **2003j:40003**

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Buslaeva, S. F. On Perron's theorem for compositions of linear-fractional transformations. (Russian. Russian summary) **2003j:40004**

Castro Smirnova, Mirta Convergence conditions for vector Stieltjes continued fractions. (English summary) **2003a:40003**

Claesson, Anders (*with* Mansour, Toufik) Counting occurrences of a pattern of type $(1, 2)$ or $(2, 1)$ in permutations. (English summary) **2003g:05004**

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— *see also* **Bodnar, D. Ī., 2003j:40003**

Goĭenko, N. P. On the convergence of expansions of Lauricella hypergeometric functions into branched continued fractions. (Ukrainian. Ukrainian summary) **2003h:33014**

Golīns′kiĭ, L. B. (*with* Khrushchev, Sergei) Cesàro asymptotics for orthogonal polynomials on the unit circle and classes of measures. (English summary) **2003f:42035**

Kaminskiĭ, A. A. (*with* Podīl′chuk, Ī. Yu.) On the maximal error of the method of operator continued fractions for the solution of problems of linear viscoelasticity. (Ukrainian. English, Russian and Ukrainian summaries)

Khrushchev, Sergei Classification theorems for general orthogonal polynomials on the unit circle. (English summary) **2003e:42036**

— *see also* **Golīns′kiĭ, L. B., 2003f:42035**

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— Algebraic solution of the Zolotarev problem. (Russian)

Mansour, Toufik (*with* Vaĭnshteĭn, A. D.) Restricted permutations and Chebyshev polynomials. (English summary) **2003a:05003**

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Nakamura, Yoshimasa Continued fractions and integrable systems. (English summary) **2003d:37114**

Osbaldestin, Andrew H. *see* **Tsygvintsev, A. V. et al., 2003f:39077**

Palmore, Julian Rates of convergence for continued fractions of irrational numbers. (English summary) **2003a:11085**

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Susskind, Perry The Margulis region and continued fractions. (English summary) **2003i:30067**

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Zayats, I. A. *see* **Shmoĭlov, V. I. et al., 2003h:40005**

30B99 None of the above, but in this section

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Edmonson, William W. *see* **Tomerlin, Andrew T., 2003f:93082**

Tomerlin, Andrew T. (*with* Edmonson, William W.) BIBO stability of d-dimensional filters. (English summary) **2003f:93082**

30Cxx Geometric function theory

30C10 Polynomials

Abdullaev, F. G. On some properties of orthogonal polynomials over an area in domains of the complex plane. III. (English and Ukrainian summaries) **2003c:30004**

Andrievskii, Vladimir V. A Remez-type inequality in terms of capacity. (English summary) **2003d:30003**

Aziz-Ul-Auzeem, Abdul (*with* Zargar, B. A.) Growth of maximum modulus of polynomials with prescribed zeros. (English summary) **2003e:30004**

— (*with* Shah, W. M.) On the location of the zeros and critical points of a polynomial. **2003i:30007**

Beardon, Alan F. (*with* Carne, T. K.; Ng, Tuen-Wai) The critical values of a polynomial. (English summary) **2003a:30002**

Bidkham, M. (*with* Dewan, K. K.) Some extremal problems of polynomials. (English summary) **2003f:30003**

Brietzke, Eduardo H. M. Monotonicity of coefficients of reciprocal power series. (English summary) **2003a:30003**

Carne, T. K. *see* **Beardon, Alan F. et al., 2003a:30002**

Coman, Dan (*with* Poletsky, Evgeny A.) Bernstein-Walsh inequalities and the exponential curve in $\mathbb{C}^2$. (English summary) **2003i:30008**

Ćurgus, Branko (*with* Mascioni, Vania) On the location of critical points of polynomials. (English summary) **2003h:30006**

Dewan, K. K. (*with* Mir, Abdullah; Yadav, R. S.) Integral mean estimates for polynomials whose zeros are within a circle. (English summary) **2003j:30009**

— (*with* Kaur, Jagjeet; Mir, Abdullah) Inequalities for the derivative of a polynomial. (English summary) **2003e:30005**

— *see also* **Bidkham, M., 2003f:30003**

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— On the application of conformal mappings in inequalities for rational functions. (Russian. Russian summary) **2003f:30004**

— (*with* Olesov, A. V.) On the application of conformal mappings to inequalities for polynomials. (Russian. Russian summary) **2003j:30011**

Erdélyi, Tamás The phase problem of ultraflat unimodular polynomials: the resolution of the conjecture of Saffari. **2003a:30004**

Eremenko, Alexandre (*with* Hayman, W. K.) On the length of lemniscates. (*see* **2003h:00022**)

Govil, N. K. On growth of polynomials. (English summary) **2003h:30007**

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Jain, Vinay Kumar Integral inequalities for polynomials having a zero of order m at the origin. (English summary) **2003h:30008**

Kaur, Jagjeet *see* **Dewan, K. K. et al., 2003e:30005**

Kim, Seon-Hong Factorization of sums of polynomials. (English summary) **2003j:30012**

Koosis, Paul Estimating polynomials and entire functions by using their logarithmic sums over complex sequences. **2003b:30006**

Levenberg, Norman (*with* Poletsky, Evgeny A.) Reverse Markov inequality. (English summary) **2003e:30006**

Makky, M. M. Similar transposed sets of polynomials. (English summary) **2003j:30013**

Mascioni, Vania *see* **Ćurgus, Branko**, **2003h:30006**

Mir, Abdullah *see* **Dewan, K. K. et al., 2003e:30005** *and* **2003j:30009**

Ng, Tuen-Wai *see* **Beardon, Alan F. et al., 2003a:30002**

Olesov, A. V. *see* **Dubinin, V. N., 2003j:30011**

Petras, Knut A short note on a question raised by B. Bojanov.

Pinkus, Allan Some remarks on zero-increasing transformations. (English summary) **2003f:30005**

Poletsky, Evgeny A. *see* **Levenberg, Norman**, **2003e:30006** *and* **Coman, Dan**, **2003i:30008**

Pritsker, Igor E. Norms of products and factors of polynomials. **2003j:30014**

— Derivatives of Faber polynomials and Markov inequalities. (English summary) **2003g:30007**

Qazi, M. A. (*with* Rahman, Q. I.) On the growth of harmonic polynomials. (English summary) **2003k:30010**

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Sendov, Blagovest On the Hausdorff geometry of polynomials, a generalized conjecture. **2003h:30009**

— Generalization of a conjecture in the geometry of polynomials. (English summary) **2003k:30011**

Shah, W. M. *see* **Aziz-Ul-Auzeem, Abdul**, **2003i:30007**

Yadav, R. S. *see* **Dewan, K. K. et al., 2003j:30009**

Zargar, B. A. *see* **Aziz-Ul-Auzeem, Abdul**, **2003e:30004**

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Alzer, Horst Bounds for the zeros of polynomials. (English summary) **2003d:30004**

— (*with* Berg, Christian) Some classes of completely monotonic functions. (English summary) **2003e:26013**

Andrievskii, Vladimir V. A note on a Remez-type inequality for trigonometric polynomials. (English summary) **2003c:41015**

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Bistritz, Yuval Zero location of polynomials with respect to the unit-circle unhampered by nonessential singularities. (English summary) **2003a:30005**

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de la Calle Ysern, Bernardo (*with* López Lagomasino, Guillermo) Relative convergence of varying orthogonal polynomials. (Spanish. English summary) **2003a:42030**

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Díaz-Barrero, José Luis An annulus for the zeros of polynomials. (English summary) **2003g:30008**

— Note on bounds of the zeros. (English summary) **2003d:30007**

(Erdős, Paul[1]) *see* **Borwein, Peter B., 2003j:11023**

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— *see also* **Coussement, J. et al., 2003f:37131**

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Lakatos, Piroska On polynomials having zeros on the unit circle. (French summary) **2003b:30007**

— On zeros of reciprocal polynomials. (English summary) **2003k:30012**

Linden, Hansjörg Containment regions for zeros of polynomials from numerical ranges of companion matrices. (English summary) **2003d:30008**

López Lagomasino, Guillermo *see* **de la Calle Ysern, Bernardo**, **2003a:42030**

Marcellán, Francisco *see* **Arvesú, Jorge et al., 2003h:42037**

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Pakovich, F. A counterexample to the "composition conjecture". (English summary) **2003j:30053**

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Rivera-Letelier, Juan Weak hyperbolicity on periodic orbits for polynomials. (English and French summaries) **2003k:37066**

Robin, W. A new Riccati equation arising in the theory of classical orthogonal polynomials. (English summary) **2003k:33012**

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Schmeisser, Gerhard Estimates for the imaginary parts of the zeros of a polynomial. (English summary) **2003h:30010**

Schmieder, Gerald (*with* Szynal, Jan) On the distribution of the derivative zeros of a complex polynomial. (English summary) **2003b:30008**

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— On a formula of cosine sum. (English summary) **2003j:60026**

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— Errata to: "A representation of a nonnegative algebraic polynomial of degree four as a sum of two squares of real polynomials". **2003b:12002b**

Van Assche, Walter *see* **Coussement, J. et al., 2003f:37131**

Zelditch, Steve *see* **Shiffman, Bernard**, **2003h:60075**

Zvonkin, Alexander *see* **Jones, Gareth A., 2003h:20067**

30C15 Zeros of polynomials, rational functions, and other analytic functions (e.g. zeros of functions with bounded Dirichlet integral) {For algebraic theory, see 12D10; for real methods, see 26C10.}

Alzer, Horst Bounds for the zeros of polynomials. (English summary) **2003d:30004**

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30C20 Conformal mappings of special domains

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30C25 Covering theorems in conformal mapping theory

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30C35 General theory of conformal mappings

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30C55 General theory of univalent and multivalent functions

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Capone, Claudia Quasiharmonic fields and Beltrami operators. (English summary) **2003f:35095**
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— Nonlinear Cauchy-Riemann operators in $\mathbb{R}^n$. (English summary) **2003i:35092**
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Shanmugalingam, Nageswari Harmonic functions on metric spaces. (English summary) **2003c:31010**
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Zheng, Xue Liang Dilatation function of Beurling-Ahlfors extension and ID-homeomorphism. (Chinese. English and Chinese summaries) **2003j:30035**
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30C70 Extremal problems for conformal and quasiconformal mappings, variational methods

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Nasyrov, S. R. Robin capacity and lift of infinitely thin airfoils. (English summary) **2003c:30019**
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Brovenko, A. V. (*with* Melezhik, P. N.; Poedinchuk, A. E.) A regularization method for a class of dual summatory equations. (Russian. English and Ukrainian summaries) **2003d:45011**
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Pommerenke, Christian (*with* Vasil'ev, A. Yu.) Angular derivatives of bounded univalent functions and extremal partitions of the unit disk. (English summary) **2003i:30024**
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Todorov, Pavel G. Variational methods for the typically real functions and applications. (English summary) **2003k:30025**
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30C75 Extremal problems for conformal and quasiconformal mappings, other methods

Avkhadiev, F. G. (*with* Maklakov, D. V.) New equations of convolution type obtained by replacing the integral by the maximum. (Russian. Russian summary) **2003b:30030**
Emel'yanov, E. G. On the problem of maximizing the product of powers of conformal radii of nonoverlapping domains. (Russian. Russian summary) **2003m:30052**
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Kir'yatskiĭ, E. Ė. On an estimate for a finite difference of order n. (Russian) (*see* **2003k:30001**)
Kresin, Gershon I. (*with* Maz'ya, Vladimir G.) Sharp parametric estimates for analytic and harmonic functions related to Hadamard-Borel-Carathéodory inequalities. (English summary) **2003k:30039**
Kuz'mina, G. V. Problems of the extremal decomposition of a Riemann sphere. II. (Russian. Russian summary) **2003j:30041**
MacGregor, T. H. (*with* Wilken, D. R.) Extreme points and support points. **2003m:30053**
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Krushkal, Samuel L. Quasiconformal deformations of holomorphic functions. (English summary) **2003b:30011**
— A remark on polygonal quasiconformal maps. (English summary) **2003c:30015**
— Quasiconformal reflections across arbitrary planar sets. (English summary) **2003h:30028**
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30C80 Maximum principle; Schwarz's lemma, Lindelöf principle, analogues and generalizations; subordination

Bulboacă, Teodor Classes of first-order differential superordinations. (English summary) **2003m:30054**
Dubinin, V. N. On the Schwarz inequality on the boundary for functions regular in the disk. (Russian. Russian summary) **2003i:30036**
Korenblum, Boris Asymptotic maximum principle. (English summary) **2003d:30029**
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MacCluer, Barbara D. (*with* Stroethoff, Karel; Zhao, Ruhan) Generalized Schwarz-Pick estimates. (English summary) **2003g:30038**
Nokrane, Abdelkrim (*with* Ransford, Thomas J.) Schwarz's lemma for algebroid multifunctions. (English summary) **2003f:30028**
Ransford, Thomas J. *see* **Nokrane, Abdelkrim, 2003f:30028**
Sekigawa, Hisao An inequality on the n-th derivatives of holomorphic functions of the unit disk into itself. **2003e:30038**
Stroethoff, Karel *see* **MacCluer, Barbara D. et al., 2003g:30038**
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Vlacci, Fabio *see* **Tauraso, Roberto, 2003e:30039**
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Aldea, Nicoleta *see* **Pascu, Nicolae N.**
Aouf, M. K. *see* **Hossen, H. M., 2003m:30024**
Aziz-Ul-Auzeem, Abdul (*with* Zargar, B. A.) Growth of maximum modulus of polynomials with prescribed zeros. (English summary) **2003e:30004**
Beardon, Alan F. Repeated compositions of analytic maps. (English summary) **2003g:30041**
— Semi-groups of analytic maps. (English summary) **2003g:30042**
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Dewan, K. K. *see* **Bidkham, M., 2003f:30003**
Hossen, H. M. (*with* Aouf, M. K.) On certain classes of functions defined by convolutions. (English summary) **2003m:30024**
Jian, Ming Differential inequalities of operator-valued analytic functions. (English summary) **2003a:30055**
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Liu, Jin-Lin (*with* Owa, Shigeyoshi) On a class of multivalent functions involving certain linear operator. (English summary) **2003m:30030**
Maĭer, F. F. Geometric properties of some classes of functions analytic in the disk. (Russian) **2003m:30031**
Marouf, Mousa S. Application of fractional calculus operators to a class of functions with negative coefficients. (English summary) **2003i:30020**
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Piejko, Krzysztof On some convolution theorems. (English summary) **2003j:30028**
— Remarks on some convolutions of functions. (English summary) **2003k:30027**
— (*with* Sokół, Janusz) Hadamard product of Schwarz functions of analytic functions. (English summary) **2003k:30028**
Qazi, M. A. (*with* Rahman, Q. I.) On the growth of harmonic polynomials. (English summary) **2003k:30010**
Rahman, Q. I. *see* **Qazi, M. A.**, **2003k:30010**
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Sasaki, Takeshi (*with* Yoshida, Masaaki) Schwarzian derivatives and uniformization. **2003i:34202**
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Szynal, Anetta Quasihomographies of the real line. (English summary) **2003k:30032**
Yoshida, Masaaki *see* **Sasaki, Takeshi**, **2003i:34202**
Zargar, B. A. *see* **Aziz-Ul-Auzeem, Abdul**, **2003e:30004**

30C85 Capacity and harmonic measure in the complex plane [see also 31A15]

Akeroyd, John R. Champagne subregions of the disk whose bubbles carry harmonic measure. (English summary) **2003c:30020**
Anić, I. (*with* Mateljević, M.; Saric, Dragomir) Extremal metrics and modulus. (English summary) **2003h:30036**
Barnard, Roger W. (*with* Pearce, Kent; Solynin, A. Yu.) An isoperimetric inequality for logarithmic capacity. (English summary) **2003g:30039**
Betsakos, Dimitrios Extremal problems for extremal distance and harmonic measure. (English summary) **2003f:30029**
Buslaeva, S. F. On a two-point variant of the transfinite diameter. (Russian. English and Ukrainian summaries) **2003m:30055**
Khavinson, S. Ya. Modifications of the concept of analytic capacity. (Russian) (*see* **2003b:00025**)
Mateljević, M. *see* **Anić, I. et al.**, **2003h:30036**
Mateu, Joan (*with* Tolsa, Xavier; Verdera, Joan[1]) The planar Cantor sets of zero analytic capacity and the local $T(b)$-theorem. **2003k:30041**
Pearce, Kent *see* **Barnard, Roger W. et al.**, **2003g:30039**
Saric, Dragomir *see* **Anić, I. et al.**, **2003h:30036**
Solynin, A. Yu. *see* **Barnard, Roger W. et al.**, **2003g:30039**
Stiemer, Marcus A representation formula for the Robin function. (English summary) **2003m:30056**
Sugawa, Toshiyuki Uniformly perfect sets—their analytical and geometrical aspects. (Japanese) **2003b:30031**
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Betsakos, Dimitrios Geometric theorems and problems for harmonic measure. (English summary) **2003c:31001**
Farag, Hany M. Curvatures of the Melnikov type, Hausdorff dimension, rectifiability, and singular integrals on $\mathbf{R}^n$. (English summary) **2003a:42013**
Gardiner, Stephen J. (*with* Pommerenke, Christian) Balayage properties related to rational interpolation. (English summary) **2003c:41019**
— An equilibrium measure characterization of circles. (English summary) **2003i:31003**
Mejía, Diego (*with* Pommerenke, Christian) Hyperbolically convex functions, dimension and capacity. (English summary) **2003f:30017**
Mel′nikov, M. S. The saga of the Painlevé problem and of analytic capacity. (Russian. Russian summary) **2003a:30001**
Pommerenke, Christian *see* **Gardiner, Stephen J.**, **2003c:41019** *and* **Mejía, Diego**, **2003f:30017**
Tamrazov, Promarz M. Local contour-solid theorems for finely hypoharmonic functions. (English summary) **2003j:31007**
Tolsa, Xavier On the analytic capacity γ_+. (English summary) **2003m:31004**
Totik, Vilmos On Markoff's inequality. (English summary) **2003c:41018**
Zwonek, Włodzimierz Wiener's type criterion for Bergman exhaustiveness. (English summary) **2003k:30016**

30C99 None of the above, but in this section

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Yanagihara, Hiroshi[3] On the growth of Bloch functions. (English summary) **2003c:30035**

30Dxx Entire and meromorphic functions, and related topics

30D05 Functional equations in the complex domain, iteration and composition of analytic functions [see also 34Mxx, 37Fxx, 39–XX]

Barsegyan, G. A. (*with* Begehr, Heinrich G. W.; Laine, Ilpo) Stability phenomenon for generalizations of algebraic differential equations. (English summary) **2003g:30040**
Beardon, Alan F. Repeated compositions of analytic maps. (English summary) **2003g:30041**
— Semi-groups of analytic maps. (English summary) **2003g:30042**
Begehr, Heinrich G. W. *see* **Barsegyan, G. A. et al.**, **2003g:30040**
Bichkov, Oleksīĭ S. (*with* Kolesnīk, Oleksīĭ V.) Dynamics of quadratic mappings in the complex plane. (Ukrainian. English and Ukrainian summaries)
Bisi, Cinzia (*with* Gentili, Graziano) Commuting holomorphic maps and linear fractional models. (English summary) **2003c:30021**
Bracci, Filippo (*with* Tauraso, Roberto; Vlacci, Fabio) Identity principles for commuting holomorphic self-maps of the unit disc. (English summary) **2003f:30030**
Bulanov, A. P. An infinite continued power with coefficients that take in turn two values. (Russian. Russian summary) **2003e:30040**
Chang, Jian Ming On a problem of H. Yoshida. (Chinese. English and Chinese summaries) **2003k:30042**
Dai, Mei Feng (*with* Su, Wei Yi) Hausdorff measure of Moran sets in (C, s)-homogeneous spaces. (Chinese. English and Chinese summaries) **2003e:30041**
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Kuijlaars, Arno B. J. (*with* Vanlessen, M.) Universality for eigenvalue correlations from the modified Jacobi unitary ensemble. **2003g:30043**
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Morosawa, Shunsuke The Carathéodory convergence of Fatou components of polynomials to Baker domains or wandering domains. (*see* **2003g:00024**)
Ng, Tuen-Wai Recent progress in unique factorization of entire functions. (English summary) **2003g:30044**
Noda, Yoji On the functional equation $f^n = \exp(P_1) + \cdots + \exp(P_m)$. II. (English summary) **2003m:30057**
Poggi-Corradini, Pietro On the failure of a generalized Denjoy-Wolff theorem. (English summary) **2003a:30031**
Rieppo, Jarkko *see* **Gundersen, Gary G. et al.**, **2003b:30032**
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Urbański, Mariusz (*with* Zinsmeister, Michel) Geometry of hyperbolic Julia-Lavaurs sets. (English summary) **2003d:30030**
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30Gxx Generalized function theory

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Collected Works:
Lewy, Hans *see* **Lewy, Hans, 2003f:01062b**

31–06 Proceedings, conferences, collections, etc.

Items listed otherwise than by author

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31Axx Two-dimensional theory

31A05 Harmonic, subharmonic, superharmonic functions

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31A10 Integral representations, integral operators, integral equations methods

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31A15 Potentials and capacity, harmonic measure, extremal length [see also 30C85]

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31A20 Boundary behavior (theorems of Fatou type, etc.)

Brakalova, Melkana A. (*with* Jenkins, James A.) On a paper of L. Carleson: "On mappings, conformal at the boundary" [J. Analyse Math. **19** (1967), 1–13; MR **35** #6821]. (English summary) **2003i:31004**
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Pavlović, Miroslav Boundary correspondence under harmonic quasiconformal homeomorphisms of the unit disk. (English summary) **2003g:30030**
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31A25 Boundary value and inverse problems

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Chu, Jeong Ho *see* **Kim, Do Wan et al., 2003h:76012**
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Gergün, Seçil (*with* Ostrovskii, I. V.) On the Poisson representation of a function harmonic in the upper half-plane. (English summary) **2003m:31001**
Gevorkyan, G. G. On the uniqueness of harmonic functions. (Russian. English and Russian summaries) **2003m:31002**
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31A30 Biharmonic, polyharmonic functions and equations, Poisson's equation

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31A35 Connections with differential equations

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31A99 None of the above, but in this section

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31Bxx Higher-dimensional theory

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31B05 Harmonic, subharmonic, superharmonic functions

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31B10 Integral representations, integral operators, integral equations methods

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Helmberg, Gilbert (*with* Kirchner, Gerhard) On the boundary behaviour of Poisson integrals of finite measures in $(n+1)$-dimensional half space. (English summary) **2003m:31006**
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Byczkowska, H. (*with* Byczkowski, T.) One-dimensional symmetric stable Feynman-Kac semigroups. (English summary) **2003d:60092**
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Kurokawa, Takahide On the closure of the Lizorkin space in spaces of Beppo Levi type. (English summary) **2003g:46034**
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Yi, Heungsu *see* **Choe, Boo Rim et al., 2003d:47037** *and* **2003h:31005**
Zappa, Anna *see* **Mantero, Anna Maria, 2003i:31010**

31B15 Potentials and capacities, extremal length

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31Cxx Other generalizations

31C05 Harmonic, subharmonic, superharmonic functions

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31C12 Potential theory on Riemannian manifolds [see also 53C20; for Hodge theory, see 58A14]

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31C15 Potentials and capacities

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31C20 Discrete potential theory and numerical methods

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31D05 Axiomatic potential theory

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32–XX Several complex variables and analytic spaces {For infinite-dimensional holomorphy, see 46G20, 58B12.}

32–01 Instructional exposition (textbooks, tutorial papers, etc.)

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32–06 Proceedings, conferences, collections, etc.

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32Axx Holomorphic functions of several complex variables

32A05 Power series, series of functions

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32A07 Special domains (Reinhardt, Hartogs, circular, tube)

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Zwonek, Włodzimierz Inner Carathéodory completeness of Reinhardt domains. (English and Italian summaries) **2003b:32003**

Items with secondary classifications in 32A07

Aytuna, A. (*with* Rashkovskiĭ, A. Yu.; Zakharyuta, V. P.) Width asymptotics for a pair of Reinhardt domains. (English summary) **2003e:32061**
Favorov, S. Yu. (*with* Rashkovskiĭ, A. Yu.; Ronkin, L. I.) Almost periodic currents, chains and divisors in tube domains. (English summary) **2003a:32010**
Jucha, Piotr The Wu metric in elementary Reinhardt domains. (English summary) **2003m:32008**
Lemmers, Oscar (*with* Wiegerinck, Jan) Reinhardt domains and the Gleason problem. (English summary) **2003c:32006**
Nguyên Viêt Anh Fatou and Korányi-Vági type theorems on the minimal ball. (English summary) **2003g:32014**
Rashkovskiĭ, A. Yu. Zeros of holomorphic almost periodic mappings with independent components. (English summary) **2003f:32009**
— *see also* **Favorov, S. Yu. et al., 2003a:32010** *and* **Aytuna, A. et al., 2003e:32061**
Ronkin, L. I. *see* **Favorov, S. Yu. et al., 2003a:32010**
Rostand, Jérémie On the automorphisms of the spectral unit ball. (English summary) **2003m:32018**
Wiegerinck, Jan *see* **Lemmers, Oscar, 2003c:32006**

Yin, Wei Ping New progress for the Bergman kernel function with explicit formula on bounded domain. (Chinese. English and Chinese summaries) **2003g:32007**
Zakharyuta, V. P. *see* **Aytuna, A. et al., 2003e:32061**

32A10 Holomorphic functions

Akashi, Shigeo Application of ε-entropy theory to Kolmogorov-Arnold representation theorem. (English summary) **2003d:32002**
Brudnyĭ, A. Yu. The distribution of values of generalized exponential polynomials on convex sets. (English summary) **2003k:32004**
Fujita, Keiko (*with* Morimoto, Mitsuo) Holomorphic functions on the dual Lie ball. **2003i:32001**
Morimoto, Mitsuo *see* **Fujita, Keiko, 2003i:32001**
Răducanu, Dorina On some classes of holomorphic functions. (English summary)
Sekine, Tadayuki *see* **Tsurumi, Kazuyuki**
Stević, Stevo Weighted integrals of holomorphic functions in $\mathbf{C}^n$. (English summary) **2003k:32005**
Tsurumi, Kazuyuki (*with* Sekine, Tadayuki) Integral means of holomorphic mappings in $\mathbf{C}^n$.

Items with secondary classifications in 32A10

Agranovich, P. Existence of a holomorphic function with given indicator in the described variable. (English, Russian and Ukrainian summaries) **2003e:32002**
Malaspina, Angelica A brothers Riesz theorem in the theory of holomorphic functions of several complex variables. **2003e:32010**
Rocha-Chávez, Reynaldo (*with* Shapiro, M. V.; Sommen, Franciscus) Integral theorems for solutions of the complex Hodge-Dolbeault system. (English summary) **2003i:32008**
Shapiro, M. V. *see* **Rocha-Chávez, Reynaldo et al., 2003i:32008**
Sommen, Franciscus *see* **Rocha-Chávez, Reynaldo et al., 2003i:32008**

32A15 Entire functions

Behnam, Hazem Shaba (*with* Srivastava, G. S.) On the spaces of a class of entire functions of two complex variables having slow rate of growth. (English summary) **2003a:32001**
Brudnyĭ, A. Yu. Inequalities for entire functions. (English summary) **2003b:32004**
Skaskĭv, O. B. (*with* Trakalo, O. M.) On the exceptional set of the Borel relation for entire multiple Dirichlet series. (Ukrainian. English and Russian summaries) **2003j:32001**
Srivastava, G. S. *see* **Behnam, Hazem Shaba, 2003a:32001**
Trakalo, O. M. *see* **Skaskĭv, O. B., 2003j:32001**
Urabe, Hironobu On factorization of entire functions of two complex variables. **2003i:32002**

Items with secondary classifications in 32A15

Abanin, A. V. (*with* Shabarshina, Irina S.) Zero sets of generators and differential ideals. (English summary) **2003e:32011**
Abdul-Hussein, Mushtaq Shaker (*with* Srivastava, G. S.) A study on bornological properties of the space of entire functions of several complex variables. (English summary) **2003h:46034**
Djebbar, Bachir Croissance des fonctions pluriharmoniques dans $\mathbb{C}^N$. (English and French summaries) [Growth of pluriharmonic functions in $\mathbb{C}^N$] **2003a:32002**
Lê Hai Khôi Density theorems for exponential systems in the Bergman space of holomorphic functions. (English summary) **2003i:32011**
Li, Bao Qin (*with* Villamor, Enrique) Interpolating multiplicity varieties in $\mathbf{C}^n$. (English summary) **2003c:32015**
Ounaies, Myriam On interpolating discrete varieties for weighted spaces of entire functions. (English and Russian summaries) **2003m:32005**
Shabarshina, Irina S. *see* **Abanin, A. V., 2003e:32011**
Srivastava, G. S. *see* **Abdul-Hussein, Mushtaq Shaker, 2003h:46034**
Supper, Raphaële Accelerating the convergence of Taylor's expansions of entire functions with exponential type. (English summary) **2003g:32006**
Villamor, Enrique *see* **Li, Bao Qin, 2003c:32015**

32A17 Special families of functions

Items with secondary classifications in 32A17

Graham, Ian (*with* Hamada, Hidetaka; Kohr, Gabriela; Suffridge, Ted J.) Extension operators for locally univalent mappings. **2003e:32029**
Hamada, Hidetaka *see* **Graham, Ian et al., 2003e:32029**
Kohr, Gabriela *see* **Graham, Ian et al., 2003e:32029**
Suffridge, Ted J. *see* **Graham, Ian et al., 2003e:32029**

32A18 Bloch functions, normal functions

Gao, Jin Shou (*with* Jia, Hou Yu) Characterizations of the Carleson measure and the Bloch spaces. (Chinese. English and Chinese summaries) **2003h:32001**
Jia, Hou Yu *see* **Gao, Jin Shou, 2003h:32001**
Ouyang, Caiheng *see* **Zhuo, Wen Xin, 2003f:32001**
Su, Jian Bing *see* **Yin, Wei Ping, 2003d:32003** *and* **2003h:32002**
Xia, Jia Rong (*with* Ye, Shan Li) A note on Λ_α functions in the Bergman metric. (Chinese. English and Chinese summaries)
Ye, Shan Li *see* **Xia, Jia Rong**
Yin, Wei Ping (*with* Su, Jian Bing) The Bloch functions on super-Cartan domains of the fourth type. (Chinese. English and Chinese summaries) **2003d:32003**
— (*with* Su, Jian Bing) The Bloch functions on super-Cartan domains. (Chinese. English and Chinese summaries) **2003h:32002**
Zhuo, Wen Xin (*with* Ouyang, Caiheng) Möbius invariant gradient and little α-Bloch functions. (English summary) **2003f:32001**

Items with secondary classifications in 32A18

Dovbush, P. V. About negligible sets for normal mappings of several complex variables. (English summary) **2003f:32002**
Favorov, S. Yu. Holomorphic almost periodic functions in tube domains and their amoebas. (English summary) **2003k:32015**
Zhang, Xue Jun² The coefficient multipliers on holomorphic function spaces in the unit ball. (Chinese. English and Chinese summaries) **2003h:32007**
Zhuo, Wen Xin Higher order radial derivatives of Bloch type functions. (English and Chinese summaries) **2003g:32011**

32A19 Normal families of functions, mappings

Dovbush, P. V. About negligible sets for normal mappings of several complex variables. (English summary) **2003f:32002**
Sun, Dao Chun *see* **Zhou, Ze Hua**
Tu, Zhen-Han On meromorphically normal families of meromorphic mappings of several complex variables into $\mathbf{P}^N(\mathbf{C})$. (English summary) **2003b:32005**
Zhou, Ze Hua (*with* Sun, Dao Chun) Quasiholomorphic functions of several complex variables and their normal rule. (Chinese. English and Chinese summaries)

Items with secondary classifications in 32A19

Lee, Young Joo $\mathscr{M}$-harmonic Bloch functions on the ball. (English summary) **2003c:32005**
Shaimkulov, B. A. On an integral representation for the trace of a meromorphic function. (Russian. English and Uzbek summaries) **2003i:32004**

32A20 Meromorphic functions

Ofman, Salomon Fonctions méromorphes et cycles analytiques. (English and French summaries) [Meromorphic functions and analytic cycles] **2003d:32004**
Shadrin, S. V. The Euler characteristic of spaces of real meromorphic functions. (Russian) **2003i:32003**
Shaimkulov, B. A. On an integral representation for the trace of a meromorphic function. (Russian. English and Uzbek summaries) **2003i:32004**

Items with secondary classifications in 32A20

Khabibullin, B. N. Dual representation of superlinear functionals and its applications in the theory of functions. II. (Russian. Russian summary) **2003b:46024**
Savchuk, M. V. The Lebesgue-Landau inequality for functions holomorphic in the polydisk D^N, $N \geq 1$. (Ukrainian. Ukrainian summary) **2003g:32005**
Shibukawa, Youichi On the classification of R-operators. (English summary) (*see* **2003a:17002**)
Tu, Zhen-Han On meromorphically normal families of meromorphic mappings of several complex variables into $\mathbf{P}^N(\mathbf{C})$. (English summary) **2003b:32005**

32A22 Nevanlinna theory (local); growth estimates; other inequalities {For geometric theory, see 32H25, 32H30.}

Agranovich, P. Existence of a holomorphic function with given indicator in the described variable. (English, Russian and Ukrainian summaries) **2003c:32002**
Diederich, Klas (*with* Mazzilli, Emmanuel) Zero varieties for the Nevanlinna class on all convex domains of finite type. (English summary) **2003b:32006**
Djebbar, Bachir Croissance des fonctions pluriharmoniques dans $\mathbb{C}^N$. (English and French summaries) [Growth of pluriharmonic functions in $\mathbb{C}^N$] **2003a:32002**
Mazzilli, Emmanuel *see* **Diederich, Klas, 2003b:32006**

Items with secondary classifications in 32A22

Ahn, Heungju (*with* Cho, Hong Rae) Zero sets of holomorphic functions in the Nevanlinna type class on convex domains in $\mathbb{C}^2$. (English summary) **2003j:32005**
Behnam, Hazem Shaba (*with* Srivastava, G. S.) On the spaces of a class of entire functions of two complex variables having slow rate of growth. (English summary) **2003a:32001**
Cho, Hong Rae *see* **Ahn, Heungju, 2003j:32005**
Hu, Pei-Chu (*with* Yang, Chung-Chun) Defect relations for moving targets. (English summary) **2003i:32028**
O'Shea, Julann The defect relation for slowly moving target hypersurfaces. (English summary) **2003i:32029**
Srivastava, G. S. *see* **Behnam, Hazem Shaba, 2003a:32001**
Yang, Chung-Chun *see* **Hu, Pei-Chu, 2003i:32028**

32A25 Integral representations; canonical kernels (Szegő, Bergman, etc.)

Charpentier, Philippe Estimations Sobolev pour le projecteur de Bergman des domaines pseudoconvexes bornés à frontière non régulière. [Sobolev estimates for the Bergman projector of bounded pseudoconvex domains with nonsmooth boundary] **2003j:32002**
Cho, Sanghyun Estimates of the Bergman kernel function on pseudoconvex domains with comparable Levi form. (English summary) **2003a:32003**
Constales, D. (*with* Kraußhar, Rolf Sören) Szegő and polymonogenic Bergman kernels for half-space and strip domains, and single-periodic functions in Clifford analysis. (English summary) **2003d:32005**
Dzhumabaev, D. Kh. A jump theorem for the Bochner-Martinelli integral in domains with a piecewise-smooth boundary. (Russian. English and Uzbek summaries) **2003i:32005**
Engliš, Miroslav Weighted Bergman kernels and quantization. (English summary) **2003f:32003**
Hirachi, Kengo Invariant theory for Bergman kernels on strongly pseudoconvex domains. (Japanese) **2003f:32004**
Kanemaru, Tadayoshi A remark on a normal domain. (English summary) **2003h:32003**
Kim, Kang-Tae (*with* Lee, Sunhong) Asymptotic behavior of the Bergman kernel and associated invariants in certain infinite type pseudoconvex domains. (English summary) **2003i:32006**

Kraußhar, Rolf Sören *see* **Constales, D., 2003d:32005**
Lee, Sunhong *see* **Kim, Kang-Tae, 2003i:32006**
Su, Jian Bing *see* **Yin, Wei Ping, 2003m:32001**
Yamane, Hideshi The Fourier-Ehrenpreis integral representations of 4-variable harmonic functions. (Japanese)
Yin, Wei Ping New progress for the Bergman kernel function with explicit formula on bounded domain. (Chinese. English and Chinese summaries) **2003g:32007**
— (*with* Su, Jian Bing) Bergman kernels on generalized Hua domains. (English summary) **2003m:32001**
— (*with* Zhao, Zhen Gang) Bergman kernel on generalized exceptional Hua domain. (English summary) **2003e:32003**
Youssfi, E. H. Proper holomorphic liftings and new formulas for the Bergman and Szegő kernels. (English summary) **2003e:32004**
Zhao, Zhen Gang *see* **Yin, Wei Ping, 2003e:32003**

Items with secondary classifications in 32A25

Berndtsson, Bo Weighted estimates for the $\overline{\partial}$-equation. **2003f:32049**
Chen, Bo-Yong (*with* Zhang, Jin-Hao) The Bergman metric on a Stein manifold with a bounded plurisubharmonic function. (English summary) **2003c:32014**
Gheorghe, Liliana Gabriela Interpolation of Besov spaces and applications. (English summary) **2003h:46049**
Huang, Sha *see* **Qiao, Yu Ying, 2003b:32014**
Li, Song-Ying (*with* Simon, Ezequias) Boundary behavior of harmonic functions in metrics of Bergman type on the polydisc. (English summary) **2003h:32009**
Pflug, Peter (*with* Zwonek, Włodzimierz) L^2_h-domains of holomorphy and the Bergman kernel. (English summary) **2003e:32017**
Qiao, Yu Ying (*with* Huang, Sha) Some problems for six kinds of quasi-Bochner-Martinelli-type higher-order singular integrals in the real Clifford analysis. (Chinese. English and Chinese summaries) **2003b:32014**
Shaimkulov, B. A. On an integral representation for the trace of a meromorphic function. (Russian. English and Uzbek summaries) **2003i:32004**
Simon, Ezequias *see* **Li, Song-Ying, 2003h:32009**
Yger, Alain Courants résiduels et théorie de l'intersection. (French summary) [Residue currents and intersection theory] **2003k:32011**
Zhang, Jin-Hao *see* **Chen, Bo-Yong, 2003c:32014**
Zwonek, Włodzimierz *see* **Pflug, Peter, 2003e:32017**

32A26 Integral representations, constructed kernels (e.g. Cauchy, Fantappiè-type kernels)

Begehr, Heinrich G. W. (*with* Dai, Dao Qing; Li, Xing[1]) Integral representation formulas in polydomains. (English summary) **2003f:32005**
Bolt, Michael A local geometric characterization of the Bochner-Martinelli kernel. (English summary) **2003j:32003**
Cho, Hong Rae Hölder estimates for $\overline{\partial}$ in analytic polyhedra. (English summary) **2003f:32006**
Dai, Dao Qing *see* **Begehr, Heinrich G. W. et al., 2003f:32005**
Gan, Ning (*with* Lin, Liang Yu) A Bochner-Henkin formula with a discrete holomorphic kernel and $\overline{\partial}$-equations on a bounded domain. (Chinese. English and Chinese summaries) **2003c:32003**
Hatziafratis, Telemachos A proof of the Ehrenpreis-Martineau theorem using the Bochner-Martinelli kernel. (English summary) **2003k:32006**
Huang, Yu Sheng Uniform estimation for a Cauchy integral and a theorem of partition at a singular point of $\mathbf{C}^n$. (Chinese. English and Chinese summaries) **2003b:32007**
Jiang, Yong Guo (*with* Lin, Liang Yu; Ruan, Qi Hua) Plemelj formula with the "quadrangle" neighborhood of the singular point on a building domain of complex biballs. (Chinese. English and Chinese summaries) **2003h:32004**
Lee, Jaesung Functions invariant under the Bochner-Martinelli integral. (English summary) **2003k:32007**
Li, Xing[1] *see* **Begehr, Heinrich G. W. et al., 2003f:32005**
Lieb, Ingo (*with* Michel, Joachim) ★ The Cauchy-Riemann complex. (English summary) **2003b:32008**
Lin, Liang Yu (*with* Qiu, Chun Hui) The singular integral equation on a closed piecewise smooth manifold in $\mathbf{C}^n$. (English summary) **2003i:32007**
— *see also* **Gan, Ning, 2003c:32003** *and* **Jiang, Yong Guo et al., 2003h:32004**
Liu, Cong Wen (*with* Shi, Ji Huai) Families of fractional-degree Cauchy-Stieltjes integrals in $\mathbb{C}^n$. (Chinese. English and Chinese summaries) **2003g:32008**
Michel, Joachim *see* **Lieb, Ingo, 2003b:32008**
Qiu, Chun Hui A new formula without boundary integrals on a Stein manifold. (English summary) **2003k:32008**
— *see also* **Lin, Liang Yu, 2003i:32007**
Rocha-Chávez, Reynaldo (*with* Shapiro, M. V.; Sommen, Franciscus) Analysis of functions and differential forms in $\mathbf{C}^m$. (English summary) **2003g:32009**
— (*with* Shapiro, M. V.; Sommen, Franciscus) Integral theorems for solutions of the complex Hodge-Dolbeault system. (English summary) **2003i:32008**
Ruan, Qi Hua *see* **Jiang, Yong Guo et al., 2003h:32004**
Shapiro, M. V. *see* **Rocha-Chávez, Reynaldo et al., 2003g:32009** *and* **2003i:32008**
Shi, Ji Huai *see* **Liu, Cong Wen, 2003g:32008**
Sommen, Franciscus *see* **Rocha-Chávez, Reynaldo et al., 2003g:32009** *and* **2003i:32008**
Yamane, Hideshi Fourier-Ehrenpreis integral presentation of harmonic functions. (Japanese)
Zhong, Chun Ping A generalization of the Koppelman-Leray-Norguet formula on Stein manifolds. (Chinese. English and Chinese summaries) **2003b:32009**
— Integral representations for differential forms of type (p, q) in terms of the Hodge $*$-operator, the $\overline{\partial}$-operator and its formal adjoint ϑ on $\mathbf{C}^n$. (Chinese. English and Chinese summaries) **2003e:32005**

Items with secondary classifications in 32A26

Ahn, Heungju (*with* Cho, Hong Rae) Zero sets of holomorphic functions in the Nevanlinna type class on convex domains in $\mathbb{C}^2$. (English summary) **2003j:32005**
— (*with* Cho, Hong Rae) Optimal non-isotropic L^p estimates with weights for $\overline{\partial}$ in strictly pseudoconvex domains. (English summary) **2003h:32051**
Cho, Hong Rae *see* **Ahn, Heungju, 2003h:32051** *and* **2003j:32005**
Hefer, Torsten ★ Regularität von Randwerten der kanonischen Lösung der $\overline{\partial}$-Gleichung auf streng pseudokonkaven Gebieten. (German) [Regularity of boundary values of the canonical solution of the $\overline{\partial}$-equation on strictly pseudoconcave domains] **2003f:32050**
Lin, Liang Yu (*with* Qiu, Chun Hui) Poincaré-Bertrand formula of a singular integral on a closed piecewise smooth manifold. (Chinese. English and Chinese summaries) **2003g:32015**
Qiu, Chun Hui *see* **Lin, Liang Yu, 2003g:32015**
Rocha-Chávez, Reynaldo (*with* Shapiro, M. V.; Sommen, Franciscus) ★ Integral theorems for functions and differential forms in $\mathbf{C}^m$. (English summary) **2003a:32004**
Sabadini, Irene (*with* Sommen, Franciscus; Struppa, Daniele C.) Computational algebra and its promises for analysis. **2003g:32022**
Shaimkulov, B. A. On an integral representation for the trace of a meromorphic function. (Russian. English and Uzbek summaries) **2003i:32004**
Shapiro, M. V. *see* **Rocha-Chávez, Reynaldo et al., 2003a:32004**
Sommen, Franciscus *see* **Rocha-Chávez, Reynaldo et al., 2003a:32004** *and* **Sabadini, Irene et al., 2003g:32022**
Struppa, Daniele C. *see* **Sabadini, Irene et al., 2003g:32022**
Willox, Ralph On the relationship between the $\overline{\partial}$ method and the Sato theory. (Japanese)

32A27 Local theory of residues [see also 32C30]

Cattani, Eduardo H. (*with* Dickenstein, Alicia; Sturmfels, Bernd) Binomial residues. (English and French summaries) **2003e:32006**
Dickenstein, Alicia *see* **Cattani, Eduardo H. et al., 2003e:32006**
Myslivets, Simona Boundary behavior of an integral of logarithmic residue type. (Russian) **2003k:32009**
Shaimkulov, B. A. A special integral representation for a local residue. (Russian. Russian summary) **2003k:32010**
Sturmfels, Bernd *see* **Cattani, Eduardo H. et al., 2003e:32006**
Yger, Alain Courants résiduels et théorie de l'intersection. (French summary) [Residue currents and intersection theory] **2003k:32011**

Items with secondary classifications in 32A27

Borodzik, Maciej (*with* Żołądek, Henryk) The Pascal theorem and some its generalizations. (English summary) **2003h:14048**
Dalal, Neal (*with* Rabin, Jeffrey M.) Magnification relations in gravitational lensing via multidimensional residue integrals. (English summary) **2003a:85004**
Gel'fond, O. A. (*with* Khovanskii, A. G.) Toric geometry and Grothendieck residues. (English and Russian summaries) **2003h:14074**
Khovanskii, A. G. *see* **Gel'fond, O. A., 2003h:14074**
Ofman, Salomon Fonctions méromorphes et cycles analytiques. (English and French summaries) [Meromorphic functions and analytic cycles] **2003d:32004**
Rabin, Jeffrey M. *see* **Dalal, Neal, 2003a:85004**
Tajima, Shinichi Algorithms for computing Grothendieck local residues—improvement with a rescue step. (Japanese) (*see* **2003a:14001**)
Żołądek, Henryk *see* **Borodzik, Maciej, 2003h:14048**

32A30 Other generalizations of function theory of one complex variable (should also be assigned at least one classification number from Section 30) {For functions of several hypercomplex variables, see 30G35.}

Khudaĭberganov, G. (*with* Kurbanov, B. T.) The boundary Morera theorem for the generalized upper half-plane. (Russian. English and Uzbek summaries) **2003i:32009**
Kurbanov, B. T. *see* **Khudaĭberganov, G., 2003i:32009**
Rocha-Chávez, Reynaldo (*with* Shapiro, M. V.; Sommen, Franciscus) ★ Integral theorems for functions and differential forms in $\mathbf{C}^m$. (English summary) **2003a:32004**
Shapiro, M. V. *see* **Rocha-Chávez, Reynaldo et al., 2003a:32004**
Sommen, Franciscus *see* **Rocha-Chávez, Reynaldo et al., 2003a:32004**

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Bolotnikov, Vladimir A boundary Nevanlinna-Pick problem for a class of analytic matrix-valued functions in the unit ball. (English summary) **2003f:47026**
Chen, Huai Hui *see* **Gamaliel, J. Y.**
Constales, D. (*with* Kraußhar, Rolf Sören) Szegő and polymonogenic Bergman kernels for half-space and strip domains, and single-periodic functions in Clifford analysis. (English summary) **2003d:32005**
Dzhuraev, Abdukhamid Dzhuraevich On the properties of some first-order systems that are elliptic in the unit ball $\mathbb{C}^2$ and degenerate on the boundary. (Russian) **2003h:32062**
Favorov, S. Yu. (*with* Udodova, O.) Almost periodic functions in finite-dimensional space with the spectrum in a cone. (English summary) **2003k:32013**
Gamaliel, J. Y. (*with* Chen, Huai Hui) On the Bloch constant for K-quasiconformal mappings in several complex variables [MR 2002b:32028]. (Chinese. English and Chinese summaries)
Gong, Sheng *see* **Liu, Tai Shun, 2003g:32030**
Graham, Ian (*with* Hamada, Hidetaka; Kohr, Gabriela; Suffridge, Ted J.) Extension operators for locally univalent mappings. **2003e:32029**
Hamada, Hidetaka *see* **Graham, Ian et al., 2003e:32029**
Hartmann, Andreas (*with* Massaneda, Xavier) Interpolating sequences for holomorphic functions of restricted growth. (English summary) **2003j:30052**
Kohr, Gabriela Using the method of Löwner chains to introduce some subclasses of biholomorphic mappings in $\mathbf{C}^n$. (English summary) **2003h:32022**
— *see also* **Graham, Ian et al., 2003e:32029**
Kraußhar, Rolf Sören *see* **Constales, D., 2003d:32005**
Liczberski, Piotr (*with* Starkov, Viktor V.) Distortion theorems for biholomorphic convex mappings in $\mathbb{C}^n$. (English summary) **2003h:32023**

Liu, Hao[1] Some partial differential inequalities for holomorphic mappings on bounded starlike circular domains in $\mathbb{C}^n$. (Chinese. English and Chinese summaries) **2003d:32014**
Liu, Tai Shun (*with* Gong, Sheng) The family of ε starlike mappings. I. (Chinese. English and Chinese summaries) **2003g:32030**
Massaneda, Xavier *see* **Hartmann, Andreas, 2003j:30052**
Menegatto, V. A. (*with* Peron, A. P.) Strict positive definiteness on spheres via disk polynomials. (English summary) **2003j:43006**
Peron, A. P. *see* **Menegatto, V. A., 2003j:43006**
Rochon, Dominic A Bloch constant for hyperholomorphic functions. (English summary) **2003f:30057**
Shon, Kwang Ho (*with* Son, Gwang Min) Subordination principle to functions of several complex variables. **2003i:32026**
Son, Gwang Min *see* **Shon, Kwang Ho, 2003i:32026**
Starkov, Viktor V. *see* **Liczberski, Piotr, 2003h:32023**
Suffridge, Ted J. *see* **Graham, Ian et al., 2003e:32029**
Supper, Raphaële ★ Fonctionnelles analytiques liées aux fonctions spéciales et fonctions arithmétiques au sens d'Abel. (French. French summary) [Analytic functions associated with special functions and arithmetical functions in the sense of Abel]
Udodova, O. *see* **Favorov, S. Yu., 2003k:32013**

32A35 H^p-spaces, Nevanlinna spaces [see also 32M15, 42B30, 43A85, 46J15]

Dubtsov, E. S. An inner function which is not weak outer. (English and French summaries) **2003c:32004**
Grangé, M. Diviseurs de Leibenson pour les classes de Hardy dans le cas convexe et en plusieurs variables. (English summary) [Leibenson divisors for Hardy classes in the convex case and in several variables] **2003h:32005**
Grellier, Sandrine (*with* Peloso, Marco M.) Decomposition theorems for Hardy spaces on convex domains of finite type. (English summary) **2003j:32004**
Kwon, E. G. Hyperbolic mean growth of bounded holomorphic functions in the ball. (English summary) **2003k:32012**
Lee, Jaesung (*with* Rim, Kyung Soo) Weighted norm inequalities for pluriharmonic conjugate functions. (English summary) **2003e:32007**
Peloso, Marco M. *see* **Grellier, Sandrine, 2003j:32004**
Rim, Kyung Soo *see* **Lee, Jaesung, 2003e:32007**

Items with secondary classifications in 32A35

Alpay, Daniel (*with* Bolotnikov, Vladimir; Rodman, Leiba) Two-sided residue interpolation in matrix H_2 spaces with symmetries: conformal conjugate involutions. (English summary) **2003k:47026**
Amar, Éric (*with* Ménini, Chantal) On an operator theory approach to the corona problem. (English summary) **2003c:47027**
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32A36 Bergman spaces

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32A37 Other spaces of holomorphic functions (e.g. bounded mean oscillation (BMOA), vanishing mean oscillation (VMOA)) [see also 46Exx]

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32A38 Algebras of holomorphic functions [see also 30H05, 46J10, 46J15]

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32A40 Boundary behavior of holomorphic functions

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32A50 Harmonic analysis of several complex variables [See mainly 43–XX]

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32A55 Singular integrals

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32A60 Zero sets of holomorphic functions

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32A65 Banach algebra techniques [See mainly 46Jxx]

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32A70 Functional analysis techniques [See mainly 46Exx]

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32A99 None of the above, but in this section

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Dai, Dao Qing *see* **Begehr, Heinrich G. W., 2003g:32017**
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32Bxx Local analytic geometry [see also 13–XX and 14–XX]

32B05 Analytic algebras and generalizations, preparation theorems

Sawaya, Jamil Divisions selon les puissances fractionnaires d'un idéal engendré par une suite régulière dans l'anneau des germes à l'origine de fonctions holomorphes sur $\mathbb{C}^2$. (English and French summaries) [Divisions by the fractional powers of an ideal generated by a regular sequence in the ring of germs of holomorphic functions at the origin of $\mathbb{C}^2$] **2003a:32008**

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Fernando, José F. Positive semidefinite germs in real analytic surfaces. (English summary) **2003b:14069**
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Saia, Marcelo José *see* **Bivià-Ausina, Carles et al., 2003e:32046**

32B10 Germs of analytic sets, local parametrization

Cygan, Ewa Nullstellensatz and cycles of zeroes of holomorphic mappings. (English summary) **2003d:32008**

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32B15 Analytic subsets of affine space

Soufflet, Rémi Asymptotic expansions of logarithmic-exponential functions. (English summary) **2003h:32011**

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Cygan, Ewa Nullstellensatz and cycles of zeroes of holomorphic mappings. (English summary) **2003d:32008**
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32B20 Semi-analytic sets and subanalytic sets [see also 14P15]

Items with secondary classifications in 32B20

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Broglia, F. (*with* Pernazza, L.) An Artin-Lang property for germs of C^∞ functions. (English summary) **2003f:32010**
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32Cxx Analytic spaces

32C05 Real-analytic manifolds, real-analytic spaces [see also 14Pxx, 58A07]

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32C07 Real-analytic sets, complex Nash functions [see also 14P15, 14P20]

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32C11 Complex supergeometry [see also 14A22, 14M30, 58A50]

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32C15 Complex spaces

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32C18 Topology of analytic spaces

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32C20 Normal analytic spaces

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32C22 Embedding of analytic spaces

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32C25 Analytic subsets and submanifolds

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32C35 Analytic sheaves and cohomology groups [see also 14Fxx, 18F20, 55N30]

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32C37 Duality theorems

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32C38 Sheaves of differential operators and their modules, D-modules [see also 14F10, 16S32, 35A27, 58J15]

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32C81 Applications to physics

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Brännlund, Johan *see* **Bengtsson, Ingemar et al., 2003j:81007**
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32C99 None of the above, but in this section

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Items with secondary classifications in 32C99

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32Dxx Analytic continuation

32D05 Domains of holomorphy

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32D10 Envelopes of holomorphy

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32D15 Continuation of analytic objects

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Lahondès, Patrick Extension d'homéomorphismes CR entre variétés polynômialement rigides. (English summary) [Extension of CR homeomorphisms between rigid polynomial varieties] **2003g:32052**
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Neelon, Tejinder S. On holomorphic extension of functions on singular real hypersurfaces in $\mathbb{C}^n$. (English summary) **2003a:32059**
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Wermer, John The argument principle and boundaries of analytic varieties. (English summary) **2003e:32016**
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32D20 Removable singularities

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32D26 Riemann domains

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32Exx Holomorphic convexity

32E05 Holomorphically convex complex spaces, reduction theory

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Items with secondary classifications in 32E05

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32E10 Stein spaces, Stein manifolds

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32E20 Polynomial convexity

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32E30 Holomorphic and polynomial approximation, Runge pairs, interpolation

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32E35 Global boundary behavior of holomorphic functions

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32E40 The Levi problem

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32Fxx Geometric convexity

32F10 q-convexity, q-concavity

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Barlet, D. (*with* Vâjâitu, Viorel) Convexity properties for cycle spaces. **2003e:32020**
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32F17 Other notions of convexity

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32F18 Finite-type conditions

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32F32 Analytical consequences of geometric convexity (vanishing theorems, etc.)

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Marinescu, Gheorghe (*with* Todor, Radu; Chiose, Ionuţ) L^2 holomorphic sections of bundles over weakly pseudoconvex coverings. (English summary) **2003j:32008**
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32F45 Invariant metrics and pseudodistances

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32Gxx Deformations of analytic structures

32G05 Deformations of complex structures [see also 13D10, 16S80, 58H10, 58H15]

Kharlamov, Viatcheslav (*with* Kulikov, Vik. S.) Deformation inequivalent complex conjugated complex structures and applications. (English summary) **2003h:32018**
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Gross, Mark (*with* Wilson, P. M. H.) Large complex structure limits of $K3$ surfaces. (English summary) **2003a:32042**
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32G07 Deformations of special (e.g. CR) structures

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32G08 Deformations of fiber bundles

Clemens, Herbert (*with* Hacon, Christopher D.) Deformations of the trivial line bundle and vanishing theorems. (English summary) **2003k:32023**
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32G10 Deformations of submanifolds and subspaces

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32G13 Analytic moduli problems {For algebraic moduli problems, see 14D20, 14D22, 14H10, 14J10.} [see also 14H15, 14J15]

Biswas, Indranil (*with* Raghavendra, N.) The determinant bundle on the moduli space of stable triples over a curve. (English summary) **2003j:32012**
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32G15 Moduli of Riemann surfaces, Teichmüller theory [see also 14H15, 30Fxx]

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Hubert, Pascal (*with* Schmidt, Thomas A.) Invariants of translation surfaces. (English summary) **2003e:32023**
Ivashkovich, S. (*with* Shevchishin, V.) Holomorphic structure on the space of Riemann surfaces with marked boundary. (English summary) **2003a:32021**
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Masur, Howard (*with* Wolf, Michael[1]) The Weil-Petersson isometry group. (English summary) **2003j:32017**
Mayer, Jan Morphisms between the moduli spaces of curves with generalized Teichmüller structure. (English summary) **2003e:32024**
Rees, Mary Teichmüller distance for analytically finite surfaces is C^2. **2003k:32025**
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Earle, Clifford J. (*with* Markovic, Vladimir; Saric, Dragomir) Barycentric extension and the Bers embedding for asymptotic Teichmüller space. (English summary) **2003i:30072**
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Ito, Kentaro Schottky groups and Bers boundary of Teichmüller space. (English summary) **2003g:30081**
Lakic, Nikola (*with* Mitra, Sudeb) Approximation by meromorphic quadratic differentials. (English summary) **2003j:30065**
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32G20 Period matrices, variation of Hodge structure; degenerations [see also 14D05, 14D07, 14K30]

Allcock, Daniel (*with* Carlson, James A.; Toledo, Domingo) The complex hyperbolic geometry of the moduli space of cubic surfaces. (English summary) **2003m:32011**
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Mayr, Peter $\mathcal{N} = 1$ mirror symmetry and open/closed string duality. (English summary) **2003e:32028**
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Sakai, Hidetaka Rational surfaces associated with affine root systems and geometry of the Painlevé equations. (English summary) **2003c:14030**
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32G34 Moduli and deformations for ordinary differential equations (e.g. Khnizhnik-Zamolodchikov equation) [see also 34Mxx]

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32G81 Applications to physics

Aldrovandi, Ettore (*with* Takhtajan, Leon A.) Generating functional in CFT on Riemann surfaces. II. Homological aspects. (English summary) **2003i:32023**
Mayr, Peter $\mathcal{N} = 1$ mirror symmetry and open/closed string duality. (English summary) **2003e:32028**
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32G99 None of the above, but in this section

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32Hxx Holomorphic mappings and correspondences

32H02 Holomorphic mappings, (holomorphic) embeddings and related questions

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Bracci, Filippo *see* **Bisi, Cinzia, 2003d:32013**
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Chen, Huai Hui *see* **Gamaliel, J. Y.**
Drinovec Drnovšek, Barbara Discs in Stein manifolds containing given discrete sets. (English summary) **2003g:32029**
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Graham, Ian (*with* Hamada, Hidetaka; Kohr, Gabriela) Parametric representation of univalent mappings in several complex variables. (English summary) **2003b:32018**
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Liu, Hao[1] Some partial differential inequalities for holomorphic mappings on bounded starlike circular domains in $\mathbf{C}^n$. (Chinese. English and Chinese summaries) **2003d:32014**
Liu, Tai Shun (*with* Gong, Sheng) The family of ε starlike mappings. I. (Chinese. English and Chinese summaries) **2003g:32030**
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Baouendi, M. S. (*with* Rothschild, Linda Preiss; Zaitsev, Dmitri) Points in general position in real-analytic submanifolds in $\mathbb{C}^N$ and applications. **2003i:32055**
— (*with* Rothschild, Linda Preiss; Zaitsev, Dmitri) Equivalences of real submanifolds in complex space. (English summary) **2003k:32051**
— (*with* Mir, Nordine; Rothschild, Linda Preiss) Reflection ideals and mappings between generic submanifolds in complex space. (English summary) **2003m:32035**
Bracci, Filippo Holomorphic dependence of the Heins map. (English summary) **2003j:32024**
Chen, Wenge *see* **Chen, Zhi Hua**, **2003d:14081**
Chen, Zhi Hua (*with* Chen, Wenge) Holomorphic map with unipotent Jacobian matrices in $\mathbb{C}^3$. (English summary) **2003d:14081**
Diederich, Klas (*with* Pinchuk, S. I.) Uniform volume estimates for holomorphic families of analytic sets. (English summary) **2003f:32011**
Feng, Shuxia (*with* Liu, Hao[1]) The growth theorem for quasi-convex mappings in Hilbert spaces. (English summary) **2003i:58008**
Ji, Shanyu Algebraicity of real analytic hypersurfaces and blowing-down. (English summary) **2003a:32060**
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Liu, Hao[1] *see* **Feng, Shuxia**, **2003i:58008**
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Molzon, Robert (*with* Tamanoi, Hirotaka) Generalized Schwarzians in several variables and Möbius invariant differential operators. (English summary) **2003k:32053**
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Rostand, Jérémie On the automorphisms of the spectral unit ball. (English summary) **2003m:32018**
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Tamanoi, Hirotaka *see* **Molzon, Robert**, **2003k:32053**
Zaitsev, Dmitri *see* **Baouendi, M. S. et al.**, **2003i:32055** *and* **2003k:32051**

32H04 Meromorphic mappings

Items with secondary classifications in 32H04

Do Duc Thai (*with* Lê Mâu Hai; Mai, Nguyen Thi Tuyet) On the Kählerity of complex spaces having the Hartogs extension property. (English summary) **2003e:32018**
Lê Mâu Hai *see* **Do Duc Thai et al.**, **2003e:32018**
Mai, Nguyen Thi Tuyet *see* **Do Duc Thai et al.**, **2003e:32018**

32H12 Boundary uniqueness of mappings

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Items with secondary classifications in 32H12

Whittlesey, Marshall A. Foliation by graphs of CR mappings and a nonlinear Riemann-Hilbert problem for smoothly bounded domains. **2003m:32033**

32H25 Picard-type theorems and generalizations {For function-theoretic properties, see 32A22.}

Items with secondary classifications in 32H25

Noda, Yoji On the functional equation $f^n = \exp(P_1) + \cdots + \exp(P_m)$. II. (English summary) **2003m:30057**
Noguchi, Junjiro (*with* Winkelmann, Jörg) Holomorphic curves and integral points off divisors. (English summary) **2003b:32019**
Shiffman, Bernard (*with* Zaidenberg, Mikhail) Hyperbolic hypersurfaces in $\mathbb{P}^n$ of Fermat-Waring type. (English summary) **2003e:32044**
Shirosaki, Manabu Uniqueness of holomorphic mappings with the same inverse images of hypersurfaces. **2003i:32030**
— A family of polynomials with the uniqueness property for linearly non-degenerate holomorphic mappings. **2003i:32031**
Tu, Zhen-Han On meromorphically normal families of meromorphic mappings of several complex variables into $\mathbf{P}^N(\mathbf{C})$. (English summary) **2003b:32005**
Winkelmann, Jörg *see* **Noguchi, Junjiro**, **2003b:32019**
Zaidenberg, Mikhail *see* **Shiffman, Bernard**, **2003e:32044**

32H30 Value distribution theory in higher dimensions {For function-theoretic properties, see 32A22.}

Aihara, Yoshihiro Algebraic dependence of meromorphic mappings with deficiencies into algebraic varieties. **2003i:32027**
Chen, Zhi Hua (*with* Liu, Yuan Cheng) Normality criteria for families of holomorphic mappings omitting non-degenerate hyperplanes into $\mathbf{P}^N(\mathbf{C})$. (Chinese. English and Chinese summaries)
Dektyarev, I. M. Analogues of essential singularities for sequences of polynomial mappings. (Russian. Russian summary) **2003a:32026**
— A new concept of a defect for holomorphic curves and their sequences. (Russian. Russian summary) **2003j:32023**
Hu, Chuan Gan (*with* Ye, Xiu-Fang) The Green-residue theorem and the Nevanlinna's second theorem on small functions in Banach spaces. (English summary) **2003h:32024**
Hu, Pei-Chu (*with* Yang, Chung-Chun) Defect relations for moving targets. (English summary) **2003i:32028**
— (*with* Yang, Chung-Chun) A note on the *abc* conjecture. (English summary) **2003g:32031**
Kobayashi, Ryoichi Toward Nevanlinna theory as a geometric model for Diophantine approximation [translation of Sūgaku **48** (1996), no. 2, 113–127; MR 98k:32036]. (English summary)
Liu, Yuan Cheng *see* **Chen, Zhi Hua**
Mori, Seiki A space of meromorphic mappings and defects of a meromorphic mapping into $\mathbf{P}^n(\mathbf{C})$. **2003g:32032**
Noguchi, Junjiro (*with* Winkelmann, Jörg) Holomorphic curves and integral points off divisors. (English summary) **2003b:32019**
O'Shea, Julann The defect relation for slowly moving target hypersurfaces. (English summary) **2003i:32029**
Ounaies, Myriam Images réciproques d'ensembles inévitables par les applications holomorphes de $\mathbb{C}^n$ dans $\mathbb{C}^n$. (English summary) [Reciprocal images of unavoidable sets by holomorphic mappings from $\mathbb{C}^n$ into $\mathbb{C}^n$] **2003c:32016**
Shirosaki, Manabu Uniqueness of holomorphic mappings with the same inverse images of hypersurfaces. **2003i:32030**
— A family of polynomials with the uniqueness property for linearly non-degenerate holomorphic mappings. **2003i:32031**
Toda, Nobushige An improvement of the second fundamental theorem for holomorphic curves. **2003i:32032**
Tu, Zhen-Han Uniqueness problem of meromorphic mappings in several complex variables for moving targets. (English summary) **2003k:32028**
Winkelmann, Jörg *see* **Noguchi, Junjiro**, **2003b:32019**
Yang, Chung-Chun *see* **Hu, Pei-Chu**, **2003g:32031** *and* **2003i:32028**
Ye, Xiu-Fang *see* **Hu, Chuan Gan**, **2003h:32024**

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Eremenko, Alexandre Value distribution and potential theory. (English summary) **2003j:30042**
Hu, Pei-Chu (*with* Mori, Seiki) Elimination of defects of non-Archimedean holomorphic curves. **2003i:32040**
Mori, Seiki *see* **Hu, Pei-Chu**, **2003i:32040**

32H35 Proper mappings, finiteness theorems

Chen, Zhi Hua (*with* Xu, De Kang) Rigidity of proper self-mapping on some kinds of generalized Hartogs triangle. (English summary) **2003e:32031**
— *see also* **Xu, De Kang**, **2003d:32016**
Drinovec Drnovšek, Barbara Proper holomorphic discs avoiding closed convex sets. (English summary) **2003h:32025**
Globevnik, Josip Interpolation by proper holomorphic embeddings of the disc into $\mathbb{C}^2$. **2003e:32032**
— On growth of holomorphic embeddings into $\mathbb{C}^2$. (English summary) **2003g:32033**
Tu, Zhen-Han Rigidity of proper holomorphic mappings between nonequidimensional bounded symmetric domains. (English summary) **2003g:32034**
— Rigidity of proper holomorphic mappings between equidimensional bounded symmetric domains. (English summary) **2003a:32027**
Xu, De Kang (*with* Chen, Zhi Hua) On proper mappings of bounded domains. (Chinese. English and Chinese summaries) **2003d:32016**
— *see also* **Chen, Zhi Hua**, **2003e:32031**

Items with secondary classifications in 32H35

D'Angelo, John P. Positivity conditions for real-analytic functions. **2003i:32019**
Drinovec Drnovšek, Barbara Discs in Stein manifolds containing given discrete sets. (English summary) **2003g:32029**
Lahondès, Patrick Extension d'homéomorphismes CR entre variétés polynômialement rigides. (English summary) [Extension of CR homeomorphisms between rigid polynomial varieties] **2003g:32052**
Spodzieja, Stanisław The Łojasiewicz exponent at infinity for overdeterminant polynomial mappings. (English summary) **2003h:14094**
Youssfi, E. H. Proper holomorphic liftings and new formulas for the Bergman and Szegő kernels. (English summary) **2003e:32004**

32H40 Boundary regularity of mappings

Aizenberg, Lev (*with* Shoikhet, David) Boundary behavior of semigroups of holomorphic mappings on the unit ball in $\mathbb{C}^n$. (English summary) **2003d:32017**
Darko, Patrick W. Condition *R* and Fefferman's mapping theorem. (English summary) **2003i:32033**
Ebenfelt, Peter Finite jet determination of holomorphic mappings at the boundary. **2003f:32019**
Shoikhet, David *see* **Aizenberg, Lev**, **2003d:32017**

Items with secondary classifications in 32H40

Abate, Marco (*with* Tauraso, Roberto) The Lindelöf principle and angular derivatives in convex domains of finite type. (English summary) **2003g:32013**
Chen, Zhi Hua (*with* Xu, De Kang) Rigidity of proper self-mapping on some kinds of generalized Hartogs triangle. (English summary) **2003e:32031**

Damour, Sylvain On the analyticity of smooth CR mappings between real-analytic CR manifolds. **2003e:32063**
Ebenfelt, Peter On the analyticity of CR mappings between nonminimal hypersurfaces. (English summary) **2003a:32058**
Meylan, Francine (*with* Mir, Nordine; Zaitsev, Dmitri) Analytic regularity of CR-mappings. **2003d:32041**
Mir, Nordine *see* **Meylan, Francine et al., 2003d:32041**
Pinchuk, S. I. (*with* Verma, Kaushal) Analytic sets and the boundary regularity of CR mappings. (English summary) **2003b:32040**
Tauraso, Roberto *see* **Abate, Marco, 2003g:32013**
Verma, Kaushal *see* **Pinchuk, S. I., 2003b:32040**
Xu, De Kang *see* **Chen, Zhi Hua, 2003e:32031**
Zaitsev, Dmitri *see* **Meylan, Francine et al., 2003d:32041**

32H50 Iteration problems

Abate, Marco The residual index and the dynamics of holomorphic maps tangent to the identity. (English summary) **2003a:32028**
Bedford, Eric (*with* Smillie, John) Polynomial diffeomorphisms of $\mathbf{C}^2$. VIII. Quasi-expansion. (English summary) **2003c:32017**
Bonifant, Araceli M. (*with* Fornæss, John Erik) Growth of degree for iterates of rational maps in several variables. (English summary) **2003g:32035**
Briend, Jean-Yves La propriété de Bernoulli pour les endomorphismes de $\mathbf{P}^k(\mathbb{C})$. (English and French summaries) [The Bernoulli property for endomorphisms of $\mathbf{P}^k(\mathbb{C})$] **2003c:32018**
Cantat, Serge Dynamique des automorphismes des surfaces $K3$. [Dynamics of $K3$-surface automorphisms] **2003h:32026**
Coman, Dan On the dynamics of a class of quadratic polynomial automorphisms of $\mathbb{C}^3$. (English summary) **2003b:32020**
Diller, Jeffrey Invariant measure and Lyapunov exponents for birational maps of $\mathbf{P}^2$. (English summary) **2003a:32029**
Fornæss, John Erik *see* **Bonifant, Araceli M., 2003g:32035**
Fridman, B. L. (*with* Kim, Kang-Tae; Krantz, Steven G.; Ma, Daowei) On fixed points and determining sets for holomorphic automorphisms. **2003i:32034**
Guedj, Vincent Dynamics of polynomial mappings of $\mathbb{C}^2$. (English summary) **2003b:32021**
Jordan, C. R. (*with* Jordan, D. A.; Jordan, Jonathan) Reversible complex Hénon maps. (English summary) **2003k:32029**
Jordan, D. A. *see* **Jordan, C. R. et al., 2003k:32029**
Jordan, Jonathan *see* **Jordan, C. R. et al., 2003k:32029**
Kim, Kang-Tae *see* **Fridman, B. L. et al., 2003i:32034**
Krantz, Steven G. *see* **Fridman, B. L. et al., 2003i:32034**
Ma, Daowei *see* **Fridman, B. L. et al., 2003i:32034**
Shinohara, Tomoko Iteration of some birational polynomial maps in $\mathbf{P}n^2$. [Iteration of some birational polynomial maps in $\mathbf{P}^2$] **2003g:32036**
Smillie, John *see* **Bedford, Eric, 2003c:32017**
Suzuki, Masaaki[I] On the Fatou component of polynomial maps on $\mathbf{C}^2$. (English summary) **2003i:32035**
Yan, Rong Mu Linearization of a class of periodic automorphisms. (Chinese. English and Chinese summaries) **2003h:32027**

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Binder, I. (*with* DeMarco, L.) Dimension of pluriharmonic measure and polynomial endomorphisms of $\mathbb{C}^n$. **2003j:32041**
Bisi, Cinzia (*with* Gentili, Graziano) Commuting holomorphic maps and linear fractional models. (English summary) **2003c:30021**
Bonifant, Araceli M. (*with* Fornæss, John Erik) Attractors. (English summary) **2003e:37057**
Dektyarev, I. M. Analogues of essential singularities for sequences of polynomial mappings. (Russian. Russian summary) **2003a:32026**
DeMarco, L. *see* **Binder, I., 2003j:32041**
Elin, Mark (*with* Reich, Simeon; Shoikhet, David) Asymptotic behavior of semigroups of ρ-non-expansive and holomorphic mappings on the Hilbert ball. (English summary) **2003k:47100**
Fornæss, John Erik *see* **Bonifant, Araceli M., 2003e:37057**
Fukushima, Yukio Hénon mapping of complex n-space in complex n-space. (*see* **2003g:00024**)
Gentili, Graziano *see* **Bisi, Cinzia, 2003c:30021**
Gong, Xianghong Quantitative estimates for periodic points of reversible and symplectic holomorphic mappings. (English summary) **2003b:37081**
Jin, Teisuke Dynamics of polynomial automorphisms of $\mathbb{C}^2$: Herman ring. (English summary)
Kim, Kang-Tae (*with* Krantz, Steven G.) Complex scaling and domains with non-compact automorphism group. (English summary) **2003b:32026**
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McMullen, Curtis T. Dynamics on $K3$ surfaces: Salem numbers and Siegel disks. (English summary) **2003a:37057**
Reich, Simeon *see* **Kuczumow, Tadeusz et al., 2003f:58018** *and* **Elin, Mark et al., 2003k:47100**
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Verjovsky, Alberto *see* **Seade, José, 2003c:32022**

32H99 None of the above, but in this section

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Forstnerič, Franc The Oka principle for sections of subelliptic submersions. **2003i:32043**
Mir, Nordine *see* **Baouendi, M. S. et al., 2003m:32035**
Rothschild, Linda Preiss *see* **Baouendi, M. S. et al., 2003m:32035**

32Jxx Compact analytic spaces {For Riemann surfaces, see 14Hxx, 30Fxx; for algebraic theory, see 14Jxx.}

32J05 Compactification of analytic spaces

Hwang, Jun-Muk (*with* Varolin, Dror) A compactification of $(\mathbb{C}^*)^4$ with no non-constant meromorphic functions. (English and French summaries) **2003c:32019**
Varolin, Dror *see* **Hwang, Jun-Muk, 2003c:32019**

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Stratmann, Bernd O. Complexification of proper Hamiltonian G-spaces. (English summary) **2003f:53153**

32J15 Compact surfaces

Apostolov, Vestislav Bihermitian surfaces with odd first Betti number. (English summary) **2003a:32030**
Dloussky, Georges Complex surfaces with Betti numbers $b_1 = 1$, $b_2 > 0$ and finite quotients. (English summary) **2003a:32031**
Dumitrescu, Sorin Structures géométriques sur les courbes et les surfaces complexes. (English and French summaries) [Geometric structures on complex curves and surfaces] **2003h:32028**

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Ballico, Edoardo Real analytic elliptic surfaces. (English summary) **2003m:14097**
Fukuma, Yoshiaki (*with* Matsunaga, Hiromichi) Almost complex vector fields on a family of elliptic $K3$ surfaces. **2003b:32030**
Lupascu, Paul The Seiberg-Witten equations on Hermitian surfaces. (English summary) **2003h:53031**
Matsunaga, Hiromichi *see* **Fukuma, Yoshiaki, 2003b:32030**
McMullen, Curtis T. Dynamics on $K3$ surfaces: Salem numbers and Siegel disks. (English summary) **2003a:37057**
Schröer, Stefan (*with* Siebert, Bernd) Irreducible degenerations of primary Kodaira surfaces. (English summary) **2003h:14018**
Siebert, Bernd *see* **Schröer, Stefan, 2003h:14018**
Zamorzaeva, Elizaveta On the classification of tilings on Riemann surfaces of genus two. (English, Romanian and Russian summaries) **2003k:52017**

32J17 Compact 3-folds

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Fujiki, Akira Topology of compact self-dual manifolds whose twistor space is of positive algebraic dimension. (English summary) **2003b:32023**
Kodama, Hiroki Complex contact three manifolds with Legendrian vector fields. (English summary) **2003e:32033**
Peternell, Thomas Towards a Mori theory on compact Kähler threefolds. III. (English and French summaries) **2003b:32024**
— *see also* **Campana, Frédéric, 2003b:32022**

32J18 Compact n-folds

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Items with secondary classifications in 32J18

Hwang, Jun-Muk (*with* Mok, Ngaiming) Varieties of minimal rational tangents on uniruled projective manifolds. (English summary) **2003a:14060**
Katzarkov, Ludmil *see* **de Oliveira, Bruno et al., 2003j:14021**
Mok, Ngaiming *see* **Hwang, Jun-Muk, 2003a:14060**
de Oliveira, Bruno (*with* Katzarkov, Ludmil; Ramachandran, Mohan) Deformations of large fundamental groups. **2003j:14021**
Peternell, Thomas Contact structures, rational curves and Mori theory. (English summary) **2003g:14022**
Ramachandran, Mohan *see* **de Oliveira, Bruno et al., 2003j:14021**

Seade, José (*with* Verjovsky, Alberto) Higher dimensional complex Kleinian groups. **2003c:32022**
Siu, Yum-Tong Extension of twisted pluricanonical sections with plurisubharmonic weight and invariance of semipositively twisted plurigenera for manifolds not necessarily of general type. (English summary) **2003j:32027a**
— A new bound for the effective Matsusaka big theorem. (English summary) **2003i:32038**
Tsuji, Hajime Deformation invariance of plurigenera. (English summary) **2003j:32027b**
Verjovsky, Alberto *see* **Seade, José**, **2003c:32022**
Wierzba, Jan Contractions of symplectic varieties. (English summary) **2003m:14023**
Winkelmann, Jörg Flat vector bundles over parallelizable manifolds. (English summary) **2003f:32024**

32J25 Transcendental methods of algebraic geometry [see also 14C30]

Boucksom, Sébastien On the volume of a line bundle. (English summary) **2003j:32025**
Demailly, Jean-Pierre Multiplier ideal sheaves and analytic methods in algebraic geometry. **2003f:32020**
Deninger, Christopher (*with* Singhof, Wilhelm) Real polarizable Hodge structures arising from foliations. (English summary) **2003e:32035**
Ionesei, Gheorghe ★ Notes on gauge theory and Hodge theory. **2003e:32036**
Singhof, Wilhelm *see* **Deninger, Christopher**, **2003e:32035**
Voisin, Claire A counterexample to the Hodge conjecture extended to Kähler varieties. **2003e:32037**

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Barannikov, S. A. Non-commutative periods and mirror symmetry in higher dimensions. (English summary) **2003g:32025**
Bertin, José (*with* Demailly, Jean-Pierre; Illusie, Luc; Peters, Chris) ★ Introduction to Hodge theory. (English summary) **2003g:14009**
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Fujiki, Akira Topology of compact self-dual manifolds whose twistor space is of positive algebraic dimension. (English summary) **2003b:32023**
Green, Mark L. (*with* Griffiths, Phillip A.) Abel's differential equations. **2003c:14009**
Grieser, Daniel (*with* Lesch, Matthias) On the L^2-Stokes theorem and Hodge theory for singular algebraic varieties. (English summary) **2003m:58031**
Griffiths, Phillip A. *see* **Green, Mark L.**, **2003c:14009**
Illusie, Luc *see* **Bertin, José et al.**, **2003g:14009**
Lesch, Matthias *see* **Grieser, Daniel**, **2003m:58031**
(Lewis, James D.) *see* **Bertin, José et al.**, **2003g:14009**
Namikawa, Yoshinori Global smoothing of Calabi-Yau threefolds. II. (English summary) **2003c:14042**
— Counter-example to global Torelli problem for irreducible symplectic manifolds. **2003k:14008a**
— Erratum: "Counter-example to global Torelli problem for irreducible symplectic manifolds" [Math. Ann. **324** (2002), no. 4, 841–845; MR 2003k:14008a]. **2003k:14008b**
Oruganti, Shobha (*with* Shi, Junping; Shivaji, Ratnasingham) Diffusive logistic equation with constant yield harvesting. I. Steady states. (English summary) **2003g:35080**
Peters, Chris *see* **Bertin, José et al.**, **2003g:14009**
Shi, Junping *see* **Oruganti, Shobha et al.**, **2003g:35080**
Shivaji, Ratnasingham *see* **Oruganti, Shobha et al.**, **2003g:35080**
Siu, Yum-Tong Very ampleness part of Fujita's conjecture and multiplier ideal sheaves of Kohn and Nadel. **2003i:32037**

32J27 Compact Kähler manifolds: generalizations, classification

Demailly, Jean-Pierre (*with* Peternell, Thomas; Schneider, Michael Hellmut) Pseudo-effective line bundles on compact Kähler manifolds. (English summary) **2003a:32032**
Mok, Ngaiming On Fano manifolds with nef tangent bundles admitting 1-dimensional varieties of minimal rational tangents. (English summary) **2003i:32036**
Namikawa, Yoshinori Projectivity criterion of Moishezon spaces and density of projective symplectic varieties. (English summary) **2003b:32025**
Peternell, Thomas *see* **Demailly, Jean-Pierre et al.**, **2003a:32032**
Schneider, Michael Hellmut *see* **Demailly, Jean-Pierre et al.**, **2003a:32032**
Tønnesen-Friedman, Christina W. Kähler Yamabe minimizers on minimal ruled surfaces. (English summary) **2003d:32019**

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Anchouche, Boudjemaa (*with* Azad, Hassan; Biswas, Indranil) Harder-Narasimhan reduction for principal bundles over a compact Kähler manifold. (English summary) **2003h:32029**
Azad, Hassan *see* **Anchouche, Boudjemaa et al.**, **2003h:32029**
Biswas, Indranil *see* **Anchouche, Boudjemaa et al.**, **2003h:32029**
Boucksom, Sébastien On the volume of a line bundle. (English summary) **2003j:32025**
Brudnyĭ, A. Yu. (*with* Onishchik, A. L.) Triangular de Rham cohomology of compact Kähler manifolds. (Russian. Russian summary) **2003e:32042**
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Demailly, Jean-Pierre On the Frobenius integrability of certain holomorphic p-forms. (English summary) **2003f:32029**
Katzarkov, Ludmil *see* **de Oliveira, Bruno et al.**, **2003j:14021**
Kawaguchi, Shu (*with* Yoshikawa, Ken-Ichi) Complex curves of genus 3, Kummer surfaces, and Quillen metrics. (Japanese)
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Peternell, Thomas Towards a Mori theory on compact Kähler threefolds. III. (English and French summaries) **2003b:32024**
— *see also* **Campana, Frédéric**, **2003b:32022**
Ramachandran, Mohan *see* **de Oliveira, Bruno et al.**, **2003j:14021**
Schlichenmaier, Martin Singular projective varieties and quantization. (English summary) **2003h:53126**
Yoshikawa, Ken-Ichi *see* **Kawaguchi, Shu**
Zuo, Kang[1] ★ Representations of fundamental groups of algebraic varieties. **2003g:14029**

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Lecture Notes in Mathematics *see* **Zuo, Kang[1]**, **2003g:14029**

32J81 Applications to physics

Items with secondary classifications in 32J81

Aspinwall, Paul S. Compactification, geometry and duality: $N = 2$. (English summary) **2003j:81132**
Bellucci, Stefano (*with* Nersesyan, A. P.) Kähler geometry and SUSY mechanics. (English summary) **2003h:81071**
Blumenhagen, Ralph (*with* Braun, Volker; Lüst, Dieter; Körs, Boris) Orientifolds of $K3$ and Calabi-Yau manifolds with intersecting D-branes. (English summary) **2003j:81137**
Braun, Volker *see* **Blumenhagen, Ralph et al.**, **2003j:81137**
Kaste, Peter (*with* Lerche, W.; Lütken, C. A.; Walcher, Johannes) D-branes on $K3$-fibrations. (English summary) **2003a:81156**
Körs, Boris *see* **Blumenhagen, Ralph et al.**, **2003j:81137**
Lerche, W. *see* **Kaste, Peter et al.**, **2003a:81156**
Lima, Eduardo (*with* Ovrut, Burt A.; Park, Jaemo) Five-brane superpotentials in heterotic M-theory. (English summary) **2003j:81166**
Lüst, Dieter *see* **Blumenhagen, Ralph et al.**, **2003j:81137**
Lütken, C. A. *see* **Kaste, Peter et al.**, **2003a:81156**
Mikhailov, Andrei Giant gravitons from holomorphic surfaces. (English summary) **2003a:81164**
Morrison, David R. TASI lectures on compactification and duality. (English summary) **2003d:81249**
Nahm, Werner Strings on $K3$. (English summary) **2003a:81165**
Nersesyan, A. P. *see* **Bellucci, Stefano**, **2003h:81071**
Ovrut, Burt A. *see* **Lima, Eduardo et al.**, **2003j:81166**
Park, Jaemo *see* **Lima, Eduardo et al.**, **2003j:81166**
Walcher, Johannes *see* **Kaste, Peter et al.**, **2003a:81156**

32J99 None of the above, but in this section

Khesin, Boris (*with* Roslyĭ, A. A.) Polar homology and holomorphic bundles. (English summary) **2003d:32020**
Roslyĭ, A. A. *see* **Khesin, Boris**, **2003d:32020**

Items with secondary classifications in 32J99

Pillay, Anand Model-theoretic consequences of a theorem of Campana and Fujiki. (English summary) **2003g:03057**

32Kxx Generalizations of analytic spaces (should also be assigned at least one other classification number from Section 32 describing the type of problem)

32K05 Banach analytic spaces [see also 58Bxx]

Ballico, Edoardo Flat coverings of infinite-dimensional complex projective spaces. (English summary) **2003j:32026**

Items with secondary classifications in 32K05

Gong, Sheng (*with* Liu, Tai Shun) Holomorphic solutions of C-R equations in a complex Banach space. (Chinese. English and Chinese summaries) **2003h:30062**
Hu, Chuan Gan (*with* Ye, Xiu-Fang) The Green-residue theorem and the Nevanlinna's second theorem on small functions in Banach spaces. (English summary) **2003h:32024**
Le Tai Thu Some geometric properties of special domains in a Banach space. **2003j:32009**
Liu, Tai Shun *see* **Gong, Sheng**, **2003h:30062**
Ye, Xiu-Fang *see* **Hu, Chuan Gan**, **2003h:32024**

32K99 None of the above, but in this section

Kim, Kang-Tae (*with* Krantz, Steven G.) Characterization of the Hilbert ball by its automorphism group. (English summary) **2003a:32033**
Krantz, Steven G. *see* **Kim, Kang-Tae**, **2003a:32033**

Items with secondary classifications in 32K99

Byun, Jisoo (*with* Gaussier, Hervé; Kim, Kang-Tae) Weak-type normal families of holomorphic mappings in Banach spaces and characterization of the Hilbert ball by its automorphism group. (English summary) **2003d:58015**
Gaussier, Hervé *see* **Byun, Jisoo et al.**, **2003d:58015**
Hamada, Hidetaka (*with* Kohr, Gabriela) Linear invariance of locally biholomorphic mappings in Hilbert spaces. (English summary) **2003e:46071**
— (*with* Kohr, Gabriela) Growth and distortion results for convex mappings in infinite dimensional spaces. (English summary) **2003e:46072**
Kim, Kang-Tae *see* **Byun, Jisoo et al.**, **2003d:58015**

Kohr, Gabriela *see* **Hamada, Hidetaka, 2003e:46071** *and* **2003e:46072**
Lee, Jinkee (*with* Shon, Kwang Ho) The $\overline{\partial}$-problem for holomorphic $(0,2)$-forms on pseudoconvex domains in separable Hilbert spaces and D.F.N. spaces. (English summary) **2003e:32070**
Liu, Tai Shun *see* **Zhang, Wen Jun[1], 2003k:58007**
Mauer, Murielle Domains of $\mathbb{R}$-analytic existence in a real separable quojection. (English summary) **2003b:46051**
Patyi, Imre On a splitting problem. (English summary) **2003i:46041**
Shon, Kwang Ho *see* **Lee, Jinkee, 2003e:32070**
Zhang, Wen Jun[1] (*with* Liu, Tai Shun) On growth and covering theorems of quasi-convex mappings in the unit ball of a complex Banach space. (English summary) **2003k:58007**

32Lxx Holomorphic fiber spaces [see also 55Rxx]

32L05 Holomorphic bundles and generalizations

Abe, Makoto[2] Steinness of the total space of a non-trivial algebraic affine $\mathbb{C}$-bundle on the punctured complex affine plane. (English summary) **2003d:32021**
Anchouche, Boudjemaa (*with* Azad, Hassan; Biswas, Indranil) Harder-Narasimhan reduction for principal bundles over a compact Kähler manifold. (English summary) **2003h:32029**
Azad, Hassan *see* **Anchouche, Boudjemaa et al., 2003h:32029**
Ballico, Edoardo Holomorphic vector bundles on open subsets of Stein manifolds. (English summary) **2003e:32038**
— Holomorphic vector bundles on $\mathbf{C}^2 \setminus \{0\}$. (English summary) **2003f:32021**
Ben Abdesselem, Adnène Complex Finsler structures on tensor products. (English summary) **2003h:32030**
Biswas, Indranil *see* **Anchouche, Boudjemaa et al., 2003h:32029**
Bleher, Pavel (*with* Shiffman, Bernard; Zelditch, Steve) Correlations between zeros and supersymmetry. (English summary) **2003d:32022**
Bradlow, Steven B. (*with* Gómez, Tomás L.) Extensions of Higgs bundles. (English summary) **2003h:32031**
Brînzănescu, Vasile Double covers and vector bundles. (English summary) **2003m:32014**
Forstnerič, Franc The Oka principle for multivalued sections of ramified mappings. (English summary) **2003m:32015**
Gómez, Tomás L. *see* **Bradlow, Steven B., 2003h:32031**
Shiffman, Bernard *see* **Bleher, Pavel et al., 2003d:32022**
Vuletescu, Victor Vector bundles with trivial determinant and second Chern class one on some nonKähler surfaces. **2003m:32016**
Zelditch, Steve From random polynomials to symplectic geometry. (English summary) **2003a:32034**
— *see also* **Bleher, Pavel et al., 2003d:32022**

Items with secondary classifications in 32L05

Azad, Hassan (*with* Biswas, Indranil) On holomorphic principal bundles over a compact Riemann surface admitting a flat connection. (English summary) **2003g:14046**
Ballico, Edoardo Holomorphic vector bundles and Nash vector bundles. (English summary) **2003j:32006**
— Degeneration of a coherent sheaf. (English summary) **2003g:14047**
Bismut, Jean-Michel (*with* Ma, Xiaonan) Familles d'immersions holomorphes et formes de torsion analytique équivariantes. (English and French summaries) [Families of equivariant holomorphic immersions and analytic torsion forms] **2003d:58050**
Biswas, Indranil A criterion for the existence of a flat connection on a parabolic vector bundle. (English summary) **2003f:14034**
— Coupled connections on a compact Riemann surface. (English summary) **2003m:14052**
— *see also* **Azad, Hassan, 2003g:14046**
Dupré, Maurice J. (*with* Glazebrook, James F.) Holomorphic framings for projections in a Banach algebra. (English summary) **2003j:46067**
Feix, Birte Hypercomplex manifolds and hyperholomorphic bundles. (English summary) **2003g:53028**
Forstnerič, Franc (*with* Prezelj, Jasna) Oka's principle for holomorphic submersions with sprays. **2003d:32027**
— The Oka principle for sections of subelliptic submersions. **2003i:32043**
Friedman, Robert David (*with* Morgan, John W.) On the converse to a theorem of Atiyah and Bott. (English summary) **2003b:14041**
Glazebrook, James F. *see* **Dupré, Maurice J., 2003j:46067**
Ma, Xiaonan *see* **Bismut, Jean-Michel, 2003d:58050**
Morgan, John W. *see* **Friedman, Robert David, 2003b:14041**
Prezelj, Jasna *see* **Forstnerič, Franc, 2003d:32027**
Thompson, George Holomorphic vector bundles, knots and the Rozansky-Witten invariants. (English summary) **2003b:57019**
Tian, Gang (*with* Yang, Baozhong) Compactification of the moduli spaces of vortices and coupled vortices. (English summary) **2003j:32013**
Yang, Baozhong *see* **Tian, Gang, 2003j:32013**

32L10 Sheaves and cohomology of sections of holomorphic vector bundles, general results [see also 14F05, 18F20, 55N30]

Biswas, Indranil Analog of secondary invariants for holomorphic vector bundles. (English summary) **2003h:32032**
Braverman, Maxim Cohomology of the Mumford quotient. (English summary) **2003k:32030**
Bruzzo, Ugo (*with* Marelli, G.; Pioli, F.) A Fourier transform for sheaves on real tori. II. Relative theory. (English summary) **2003a:32035**
Chiose, Ionuț *see* **Todor, Radu et al., 2003d:32023**
Eyssidieux, Philippe Invariants de von Neumann des faisceaux analytiques cohérents. (English summary) [Von Neumann invariants of coherent analytic sheaves] **2003c:32020**
Laurent-Thiébaut, Christine (*with* Leiterer, Jürgen) Finiteness and separation theorems for Dolbeault cohomologies with support conditions. (English summary) **2003f:32022**
Leiterer, Jürgen *see* **Laurent-Thiébaut, Christine, 2003f:32022**
Marelli, G. *see* **Bruzzo, Ugo et al., 2003a:32035**
Marinescu, Gheorghe *see* **Todor, Radu et al., 2003d:32023**
Pioli, F. *see* **Bruzzo, Ugo et al., 2003a:32035**
Siu, Yum-Tong Very ampleness part of Fujita's conjecture and multiplier ideal sheaves of Kohn and Nadel. **2003i:32037**
— Extension of twisted pluricanonical sections with plurisubharmonic weight and invariance of semipositively twisted plurigenera for manifolds not necessarily of general type. (English summary) **2003j:32027a**
— A new bound for the effective Matsusaka big theorem. (English summary) **2003i:32038**
Todor, Radu (*with* Chiose, Ionuț; Marinescu, Gheorghe) Morse inequalities for covering manifolds. (English summary) **2003d:32023**
Tsuji, Hajime Deformation invariance of plurigenera. (English summary) **2003j:32027b**

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Abe, Makoto[2] Steinness of the total space of a non-trivial algebraic affine $\mathbb{C}$-bundle on the punctured complex affine plane. (English summary) **2003d:32021**
Berndtsson, Bo An eigenvalue estimate for the $\overline{\partial}$-Laplacian. (English summary) **2003j:32048**
Bismut, Jean-Michel Les formes de torsion holomorphes du complexe de de Rham. (English and French summaries) [The holomorphic torsion forms of the de Rham complex] **2003h:58048**
Demailly, Jean-Pierre Multiplier ideal sheaves and analytic methods in algebraic geometry. **2003f:32020**
Harris, Adam (*with* Tonegawa, Yoshihiro) L^p-curvature and the Cauchy-Riemann equation near an isolated singular point. (English summary) **2003a:32014**
Materov, E. N. The Bott formula for toric varieties. (English and Russian summaries) **2003e:14041**
Sekiguchi, Hideko Combinatorial formula of the dimension of global solutions to a generalized hypergeometric system $\widetilde{\mathcal{E}}_{3,2}(v)$. **2003a:33030**
Tian, Gang (*with* Yang, Baozhong) Compactification of the moduli spaces of vortices and coupled vortices. (English summary) **2003j:32013**
Tomassini, Giuseppe (*with* Vâjâitu, Viorel) An approximation theorem for sections of reflexive sheaves. (English summary) **2003f:32013**
Tonegawa, Yoshihiro *see* **Harris, Adam, 2003a:32014**
Vâjâitu, Viorel *see* **Tomassini, Giuseppe, 2003f:32013**
Winkelmann, Jörg Flat vector bundles over parallelizable manifolds. (English summary) **2003f:32024**
Yang, Baozhong *see* **Tian, Gang, 2003j:32013**

32L20 Vanishing theorems

Items with secondary classifications in 32L20

Camacho, César (*with* Movasati, H.; Sad, P.) Fibered neighborhoods of curves in surfaces. (English summary) **2003m:32029**
Chiose, Ionuț *see* **Marinescu, Gheorghe et al., 2003j:32008**
Clemens, Herbert (*with* Hacon, Christopher D.) Deformations of the trivial line bundle and vanishing theorems. (English summary) **2003k:32023**
Hacon, Christopher D. *see* **Clemens, Herbert, 2003k:32023**
Iskovskikh, V. A. Vanishing theorems. **2003a:14024**
Marinescu, Gheorghe (*with* Todor, Radu; Chiose, Ionuț) L^2 holomorphic sections of bundles over weakly pseudoconvex coverings. (English summary) **2003j:32008**
Movasati, H. *see* **Camacho, César et al., 2003m:32029**
Sad, P. *see* **Camacho, César et al., 2003m:32029**
Todor, Radu *see* **Marinescu, Gheorghe et al., 2003j:32008**

32L25 Twistor theory, double fibrations [see also 53C28]

Bailey, Toby N. (*with* David, Liana) The Penrose transform for compactly supported cohomology. (English summary) **2003c:32021**
David, Liana The Penrose transform for currents. (English summary) **2003j:32028**
— *see also* **Bailey, Toby N., 2003c:32021**
Honda, Nobuhiro Degenerate double solids as twistor spaces. (English summary) **2003m:32017**

Items with secondary classifications in 32L25

Fujiki, Akira Topology of compact self-dual manifolds whose twistor space is of positive algebraic dimension. (English summary) **2003b:32023**
Honda, Nobuhiro On the structure of Pedersen-Poon twistor spaces. (English summary) **2003g:53072**
Kapustin, Anton (*with* Kuznetsov, Aleksandr Gennad'evich; Orlov, D. O.) Noncommutative instantons and twistor transform. (English summary) **2003f:58017**
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32L99 None of the above, but in this section

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32Mxx Complex spaces with a group of automorphisms

32M05 Complex Lie groups, automorphism groups acting on complex spaces [see also 22E10]

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32M10 Homogeneous complex manifolds [see also 14M17, 57T15]

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32M12 Almost homogeneous manifolds and spaces [see also 14M17]

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32M15 Hermitian symmetric spaces, bounded symmetric domains, Jordan algebras [see also 22E10, 22E40, 53C35, 57T15]

Arazy, Jonathan (*with* Upmeier, Harald) Invariant symbolic calculi and eigenvalues of invariant operators on symmetric domains. (English summary) **2003k:32031**

Bae, Heekyung (*with* Lim, Yongdo) On some Finsler structures of symmetric cones. (English summary) **2003m:32019**

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Nomura, Takaaki A symmetry characterization for homogeneous Siegel domains related to Berezin transforms. (English summary) **2003h:32037**

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32M17 Automorphism groups of C^n and affine manifolds

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Hirai, Etsuko *see* **Fukui, Kazuhiko, 2003f:57074**
Isidro, José María[1] A note on a theorem of H. Cartan. (English summary) **2003d:32024**
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32M25 Complex vector fields

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32Nxx Automorphic functions [see also 11Fxx, 20H10, 22E40, 30F35]

32N10 Automorphic forms

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32N15 Automorphic functions in symmetric domains

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Pardon, William *see* **Goresky, Mark, 2003g:32047**

32P05 Non-Archimedean complex analysis (should also be assigned at least one other classification number from Section 32 describing the type of problem)

Gardener, T. S. (*with* Schoutens, Hans) Rigid subanalytic sets. (English summary) **2003f:32028**
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Mori, Seiki *see* **Hu, Pei-Chu, 2003i:32040**
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32Qxx Complex manifolds

32Q05 Negative curvature manifolds

Items with secondary classifications in 32Q05

Mok, Ngaiming Local holomorphic isometric embeddings arising from correspondences in the rank-1 case. **2003k:32032**

32Q15 Kähler manifolds

Brudnyĭ, A. Yu. (*with* Onishchik, A. L.) Triangular de Rham cohomology of compact Kähler manifolds. (Russian. Russian summary) **2003e:32042**
Chen, Xiuxiong The space of Kähler metrics. (English summary) **2003b:32031**
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Takhtajan, Leon A. (*with* Zograf, P. G.) Hyperbolic 2-spheres with conical singularities, accessory parameters and Kähler metrics on $\mathcal{M}_{0,n}$. (English summary) **2003j:32031**
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Items with secondary classifications in 32Q15

Alessandrini, Lucia (*with* Bassanelli, G.; Leoni, M.) 1-convex manifolds are p-Kähler. (English summary) **2003k:32021**
Bassanelli, G. *see* **Alessandrini, Lucia et al., 2003k:32021**
Campana, Frédéric (*with* Peternell, Thomas) Appendix to the article of T. Peternell: ["Toward a Mori theory and compact Kähler threefolds. III", Bull. Soc. Math. France **129** (2001), no. 3, 339–356; MR 2003b:32024] the Kodaira dimension of Kummer threefolds. (English and French summaries) **2003b:32022**

Cantat, Serge Dynamique des automorphismes des surfaces $K3$. [Dynamics of $K3$-surface automorphisms] **2003h:32026**
Chen, Bing-Long (*with* Zhu, Xi-Ping) A property of Kähler-Ricci solitons on complete complex surfaces. (English summary) **2003g:53115**
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— (*with* Peternell, Thomas; Schneider, Michael Hellmut) Pseudo-effective line bundles on compact Kähler manifolds. (English summary) **2003a:32032**
Donaldson, S. K. Holomorphic discs and the complex Monge-Ampère equation. **2003m:32037**
Furutani, Kenro Quantization of the geodesic flow on quaternion projective spaces. (English summary) **2003e:53125**
Futaki, Akito Some invariant and equivariant cohomology classes of the space of Kähler metrics. (English summary) **2003a:32041**
Harris, Adam Some applications of variational calculus in Hermitian geometry. (English summary) **2003a:58021**
Hunsicker, Eugénie L^2 harmonic forms for a class of complete Kähler metrics. **2003f:58041**
Leoni, M. *see* **Alessandrini, Lucia et al., 2003k:32021**
McMullen, Curtis T. Dynamics on $K3$ surfaces: Salem numbers and Siegel disks. (English summary) **2003a:37057**
Nakagawa, Yasuhiro The Bando-Calabi-Futaki character and its lifting to a group character. (English summary) **2003m:32020**
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Peternell, Thomas Towards a Mori theory on compact Kähler threefolds. III. (English and French summaries) **2003b:32024**
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Schneider, Michael Hellmut *see* **Demailly, Jean-Pierre et al., 2003a:32032**
Simanca, Santiago R. (*with* Stelling, Luisa D.) Canonical Kähler classes. (English summary) **2003f:32031**
Stelling, Luisa D. *see* **Simanca, Santiago R., 2003f:32031**
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Zhu, Xi-Ping *see* **Chen, Bing-Long, 2003g:53115**

32Q20 Kähler-Einstein manifolds [see also 53Cxx]

Araujo, Carolina Kähler-Einstein metrics for some quasi-smooth log del Pezzo surfaces. (English summary) **2003g:32039**
Ben Abdesselem, Adnène Lower bound of admissible functions on sphere. (English and French summaries) **2003k:32035**
— (*with* Cherrier, Pascal) Einstein-Kähler metrics on a class of bundles involving integral weights. (English and French summaries) **2003a:32040**
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Futaki, Akito Some invariant and equivariant cohomology classes of the space of Kähler metrics. (English summary) **2003a:32041**
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Ni, Lei The Poisson equation and Hermitian-Einstein metrics on holomorphic vector bundles over complete noncompact Kähler manifolds. (English summary) **2003m:32021**
Simanca, Santiago R. (*with* Stelling, Luisa D.) Canonical Kähler classes. (English summary) **2003f:32031**
Stelling, Luisa D. *see* **Simanca, Santiago R., 2003f:32031**
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Bradlow, Steven B. (*with* Gómez, Tomás L.) Extensions of Higgs bundles. (English summary) **2003h:32031**
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Dancer, Andrew S. (*with* Strachan, Ian A. B.) Einstein metrics on tangent bundles of spheres. (English summary) **2003k:53047**
Galicki, Krzysztof *see* **Boyer, Charles P. et al., 2003b:53047** *and* **2003g:53061**
Gómez, Tomás L. *see* **Bradlow, Steven B., 2003h:32031**
Nakamaye, Michael *see* **Boyer, Charles P. et al., 2003g:53061**
Strachan, Ian A. B. *see* **Dancer, Andrew S., 2003k:53047**
Tian, Gang *see* **Chen, Xiuxiong, 2003c:53095**
Zhu, Xiaohua Ricci curvature on the blow-up of $\mathbb{CP}^2$ at two points. (English summary) **2003f:53071**

32Q25 Calabi-Yau theory

Chen, Jingyi Lagrangian sections and holomorphic U(1)-connections. (English summary) **2003b:32032**
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32S30 Deformations of singularities; vanishing cycles [see also 14B07]

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32S60 Stratifications; constructible sheaves; intersection cohomology [see also 58Kxx]

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32S65 Singularities of holomorphic vector fields and foliations

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32S70 Other operations on singularities

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32Txx Pseudoconvex domains

32T05 Domains of holomorphy

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32T15 Strongly pseudoconvex domains

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Loi, Andrea Holomorphic maps of Hartogs domains into complex space forms. (English summary) **2003m:32022**
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32T25 Finite type domains

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32T27 Geometric and analytic invariants on weakly pseudoconvex boundaries

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32T35 Exhaustion functions

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32Uxx Pluripotential theory

32U05 Plurisubharmonic functions and generalizations [see also 31C10]

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Coman, Dan (*with* Nivoche, Stéphanie) Plurisubharmonic functions with singularities and affine invariants for finite sets in $\mathbb{C}^n$. **2003b:32035**
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Kolodziej, Sławomir Equicontinuity of families of plurisubharmonic functions with bounds on their Monge-Ampère masses. (English summary) **2003f:32043**
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32U15 General pluripotential theory

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32U20 Capacity theory and generalizations

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32U25 Lelong numbers

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32U30 Removable sets

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32U35 Pluricomplex Green functions

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Bloom, Thomas On families of polynomials which approximate the pluricomplex Green function. (English summary) **2003a:32055**
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32U40 Currents

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Wikström, Frank Partial harmonicity of continuous maximal plurisubharmonic functions. (English summary) **2003a:32053**

32Vxx CR manifolds

32V05 CR structures, CR operators, and generalizations

Alekseevskiĭ, D. V. (*with* Spiro, Andrea F.) Compact homogeneous CR manifolds. (English summary) **2003e:32062**
Huckleberry, Alan T. (*with* Völler, M.) A CR-momentum ansatz for nilpotent groups. (English summary) **2003a:32056**
Spiro, Andrea F. *see* **Alekseevskiĭ, D. V., 2003e:32062**
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Čap, Andreas (*with* Gover, A. Rod) Tractor calculi for parabolic geometries. (English summary) **2003j:53033**
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32V10 CR functions

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Kytmanov, A. M. (*with* Myslivets, Simona; Tarkhanov, Nikolai) Analytic representation of CR functions on hypersurfaces with singularities. (English summary) **2003i:32053**
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Henkin, Gennadi M. (*with* Michel, Vincent) Principe de Hartogs dans les variétés CR. (English and French summaries) [The Hartogs principle in CR manifolds] **2003i:32054**
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32V15 CR manifolds as boundaries of domains

Christ, Michael Hypoellipticity of the Kohn Laplacian for three-dimensional tubular Cauchy-Riemann structures. (English summary) **2003k:32048**
Epstein, Charles L. Geometric bounds on the relative index. (English summary) **2003m:32034**
Stenzel, Matthew B. Orbits of the geodesic flow and chains on the boundary of a Grauert tube. (English summary) **2003h:32047**

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Ebenfelt, Peter Finite jet determination of holomorphic mappings at the boundary. **2003f:32019**
Epstein, Charles L. (*with* Henkin, Gennadi M.) Can a good manifold come to a bad end? (English summary) **2003e:32064**
Henkin, Gennadi M. *see* **Epstein, Charles L.**, **2003e:32064**
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Merker, Joël On the partial algebraicity of holomorphic mappings between two real algebraic sets. (English and French summaries) **2003j:32044**
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32V20 Analysis on CR manifolds

Brinkschulte, Judith Laufer's vanishing theorem for embedded CR manifolds. (English summary) **2003b:32039**
Gamara, Najoua The CR Yamabe conjecture—the case $n = 1$. (English summary) **2003d:32040a**
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Laurent-Thiébaut, Christine Isomorphisme de Dolbeault et dualité de Serre dans les variétés CR. [Dolbeault isomorphism and Serre duality in CR manifolds] **2003k:32049**
Meylan, Francine (*with* Mir, Nordine; Zaitsev, Dmitri) Analytic regularity of CR-mappings. **2003d:32041**
Mir, Nordine *see* **Meylan, Francine et al.**, **2003d:32041**
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Brinkschulte, Judith Local exactness of top-degree forms in abstract Cauchy-Riemann complexes. (English summary) **2003m:32036**
Garfield, Peter M. *see* **Akahori, Takao et al.**, **2003i:32022**
Kowalski, R. Travis A hypersurface in $\mathbb{C}^2$ whose stability group is not determined by 2-jets. (English summary) **2003f:32018**
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Wang, Wei[11] Osculating CR manifolds by nilpotent Lie groups in the theory of several complex variables. (English summary) **2003f:32045**

32V25 Extension of functions and other analytic objects from CR manifolds

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Damour, Sylvain On the analyticity of smooth CR mappings between real-analytic CR manifolds. **2003e:32063**
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Ebenfelt, Peter On the analyticity of CR mappings between nonminimal hypersurfaces. (English summary) **2003a:32058**
Henkin, Gennadi M. (*with* Michel, Vincent) Principe de Hartogs dans les variétés CR. (English and French summaries) [The Hartogs principle in CR manifolds] **2003i:32054**
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Merker, Joël (*with* Porten, Egmont) On wedge extendability of CR-meromorphic functions. (English summary) **2003h:32049**
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Ebenfelt, Peter (*with* Huang, Xiao Jun[1]) On a generalized reflection principle in $\mathbb{C}^2$. **2003e:32019**
Epstein, Charles L. (*with* Henkin, Gennadi M.) Can a good manifold come to a bad end? (English summary) **2003e:32064**
Henkin, Gennadi M. *see* **Epstein, Charles L.**, **2003e:32064**
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Merker, Joël On the partial algebraicity of holomorphic mappings between two real algebraic sets. (English and French summaries) **2003j:32044**
Meylan, Francine (*with* Mir, Nordine; Zaitsev, Dmitri) Analytic regularity of CR-mappings. **2003d:32041**
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32V30 Embeddings of CR manifolds

Brinkschulte, Judith (*with* Hill, C. Denson; Nacinovich, Mauro) Obstructions to generic embeddings. (English and French summaries) **2003k:32050**
Christ, Michael Spiraling and nonhypoellipticity. **2003g:32053**
Dwilewicz, Roman (*with* Hill, C. Denson) The conormal type function for CR manifolds. (English summary) **2003d:32043**
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Nacinovich, Mauro *see* **Hill, C. Denson**, **2003g:32056**
Petit, Robert Harmonic maps and strictly pseudoconvex CR manifolds. (English summary) **2003g:58025**

32V40 Real submanifolds in complex manifolds

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— (*with* Rothschild, Linda Preiss; Zaitsev, Dmitri) Equivalences of real submanifolds in complex space. (English summary) **2003k:32051**
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Barrett, David E. Holomorphic motion of circles through affine bundles. **2003g:32054**
Beloshapka, V. K. A cubic model of a real manifold. (Russian. Russian summary) **2003d:32045**
— A quasiperiodic system of polynomial models of CR-manifolds. (Russian. Russian summary) **2003d:32044**
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Coffman, Adam CR singular immersions of complex projective spaces. (English summary) **2003k:32052**

Ji, Shanyu Algebraicity of real analytic hypersurfaces and blowing-down. (English summary) **2003a:32060**
Klingenberg, Wilhelm, Jr. Real hypersurfaces in Kähler manifolds. **2003d:32046**
Lamel, Bernhard Holomorphic maps of real submanifolds in complex spaces of different dimensions. (English summary) **2003e:32066**
Loboda, A. V. Homogeneous strictly pseudoconvex hypersurfaces in $\mathbb{C}^3$ with two-dimensional isotropy groups. (Russian. Russian summary) **2003e:32067**
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— Homogeneous nondegenerate surfaces in $\mathbb{C}^3$ with two-dimensional isotropy groups. (Russian) **2003e:32068**
Matsumoto, Kazuko (*with* Ohsawa, Takeo) On the real analytic Levi flat hypersurfaces in complex tori of dimension two. (English and French summaries) **2003j:32043**
Merker, Joël On the partial algebraicity of holomorphic mappings between two real algebraic sets. (English and French summaries) **2003j:32044**
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Montanari, Annamaria Real hypersurfaces in $\mathbb{C}^{n+1}$ and motion by the trace of the Levi form. **2003c:32035**
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Rothschild, Linda Preiss *see* **Baouendi, M. S. et al., 2003i:32055; 2003k:32051** *and* **2003m:32035**
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Tumanov, A. Foliations by complex curves and the geometry of real surfaces of finite type. (English summary) **2003f:32048**
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Damour, Sylvain Feuilletages holomorphes locaux et analyticité partielle d'applications CR $\mathscr{C}^\infty$. (English summary) [Local holomorphic foliations and partial analyticity of CR $\mathscr{C}^\infty$-mappings] **2003h:32048**
— *see also* **Coupet, Bernard et al., 2003f:32046**
Kan, Su-Jen (*with* Ma, Daowei) On rigidity of Grauert tubes over Riemannian manifolds of constant curvature. **2003j:53055**
Kytmanov, A. M. (*with* Myslivets, Simona; Tarkhanov, Nikolai) Analytic representation of CR functions on hypersurfaces with singularities. (English summary) **2003i:32053**
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Merker, Joël *see* **Coupet, Bernard et al., 2003f:32046**
Mir, Nordine On the convergence of formal mappings. (English summary) **2003e:32030**
Myslivets, Simona *see* **Kytmanov, A. M. et al., 2003i:32053**
Siu, Yum-Tong $\overline{\partial}$-regularity for weakly pseudoconvex domains in compact Hermitian symmetric spaces with respect to invariant metrics. **2003h:32057**
Sukhov, A. B. *see* **Coupet, Bernard et al., 2003f:32046**
Tarkhanov, Nikolai *see* **Kytmanov, A. M. et al., 2003i:32053**

32Wxx Differential operators in several variables

32W05 $\overline{\partial}$ and $\overline{\partial}$-Neumann operators

Adachi, Kenzō Optimal L^p estimates for the $\overline{\partial}$ equation on real ellipsoids. (English summary) **2003b:32042**
Ahn, Heungju (*with* Cho, Hong Rae) Optimal non-isotropic L^p estimates with weights for $\overline{\partial}$ in strictly pseudoconvex domains. (English summary) **2003h:32051**
Baracco, Luca (*with* Bettiol, Pier Nicola) L^2-estimates and solvability of the $\overline{\partial}$ system on weakly q-convex dihedrons. (English summary) **2003i:32057**
Berndtsson, Bo Weighted estimates for the $\overline{\partial}$-equation. **2003f:32049**
— (*with* Sibony, Nessim) The $\overline{\partial}$-equation on a positive current. (English summary) **2003a:32061**
Bettiol, Pier Nicola *see* **Baracco, Luca, 2003i:32057**
Cho, Hong Rae *see* **Ahn, Heungju, 2003h:32051**
Cho, Sanghyun Sobolev estimates of solutions of the $\overline{\partial}$-Neumann problem on parameters. (English summary) **2003i:32058**
Darko, Patrick W. Hölder estimates for the $\overline{\partial}$-operator on polycylinders. (English summary) **2003h:32052**
— Sobolev cohomology for locally polycylindrical domains. (English summary) **2003b:32043**
— Cohomology with bounds and Carleman estimates for the $\overline{\partial}$-operator on Stein manifolds. (English summary) **2003h:32053**
— *see also* **Tutschke, W., 2003h:32059**
Haslinger, Friedrich Compactness of the canonical solution operator to $\overline{\partial}$ restricted to Bergman spaces. (English summary) **2003g:32055**
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Hefer, Torsten ★ Regularität von Randwerten der kanonischen Lösung der $\overline{\partial}$-Gleichung auf streng pseudokonkaven Gebieten. (German) [Regularity of boundary values of the canonical solution of the $\overline{\partial}$-equation on strictly pseudoconcave domains] **2003f:32050**
— (*with* Lieb, Ingo) On the compactness of the $\overline{\partial}$-Neumann operator. (English and French summaries) **2003a:32062**
Henkin, Gennadi M. (*with* Iordan, Andrei) Regularity of $\overline{\partial}$ on pseudoconcave compacts and applications. (English summary) **2003a:32063**
Iordan, Andrei *see* **Henkin, Gennadi M., 2003a:32063**
Knirsch, Wolfgang Compactness of the canonical solution operator of $\overline{\partial}$ on bounded pseudoconvex domains. (English summary) **2003j:32045**
Lee, Jinkee (*with* Shon, Kwang Ho) The $\overline{\partial}$-problem for holomorphic $(0,2)$-forms on pseudoconvex domains in separable Hilbert spaces and D.F.N. spaces. (English summary) **2003e:32070**
Lieb, Ingo *see* **Hefer, Torsten, 2003a:32062**
McNeal, Jeffery D. Uniform subelliptic estimates on scaled convex domains of finite type. (English summary) **2003a:32064**
Mohammed, Alip The classical and the modified Dirichlet problem for the inhomogeneous pluriholomorphic system in polydiscs. (English summary) **2003h:32054**
— The Neumann problem for inhomogeneous Cauchy-Riemann systems in a polydisc. (English summary) **2003h:32055**
Ohsawa, Takeo A precise L^2 division theorem. **2003h:32056**
Ortega-Cerdà, Joaquim Multipliers and weighted $\overline{\partial}$-estimates. (English summary) **2003j:32046**
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Sibony, Nessim *see* **Berndtsson, Bo, 2003a:32061**
Siu, Yum-Tong $\overline{\partial}$-regularity for weakly pseudoconvex domains in compact Hermitian symmetric spaces with respect to invariant metrics. **2003h:32057**
Straube, Emil J. Good Stein neighborhood bases and regularity of the $\overline{\partial}$-Neumann problem. (English summary) **2003d:32048**
— (*with* Sucheston, Marcel K.) Plurisubharmonic defining functions, good vector fields, and exactness of a certain one form. (English summary) **2003f:32051**
— (*with* Sucheston, Marcel K.) Levi foliations in pseudoconvex boundaries and vector fields that commute approximately with $\overline{\partial}$. (English summary) **2003h:32058**
Sucheston, Marcel K. *see* **Straube, Emil J., 2003f:32051** *and* **2003h:32058**
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Alexandre, William Estimées C^k pour les domaines convexes de type fini de $\mathbb{C}^n$. (English and French summaries) [C^k estimates for convex domains of finite type in $\mathbb{C}^n$] **2003e:32058**
Barletta, Elisabetta (*with* Dragomir, Sorin) Differential equations on contact Riemannian manifolds. (English summary) **2003a:53112**
Berndtsson, Bo An eigenvalue estimate for the $\overline{\partial}$-Laplacian. (English summary) **2003j:32048**
Cho, Hong Rae Hölder estimates for $\overline{\partial}$ in analytic polyhedra. (English summary) **2003f:32006**
— *see also* **Ahn, Heungju, 2003j:32005**
Cho, Sanghyun Estimates of the Bergman kernel function on pseudoconvex domains with comparable Levi form. (English summary) **2003a:32003**
Christ, Michael Hypoellipticity of the Kohn Laplacian for three-dimensional tubular Cauchy-Riemann structures. (English summary) **2003k:32048**
Cordaro, Paulo D. Approximate solutions in locally integrable structures. (English summary) **2003b:35158**
Diederich, Klas (*with* Mazzilli, Emmanuel) Zero varieties for the Nevanlinna class on all convex domains of finite type. (English summary) **2003b:32006**
Dragomir, Sorin *see* **Barletta, Elisabetta, 2003a:53112**
Dzhumabaev, D. Kh. A jump theorem for the Bochner-Martinelli integral in domains with a piecewise-smooth boundary. (Russian. English and Uzbek summaries) **2003i:32005**
Gan, Ning (*with* Lin, Liang Yu) A Bochner-Henkin formula with a discrete holomorphic kernel and $\overline{\partial}$-equations on a bounded domain. (Chinese. English and Chinese summaries) **2003c:32003**
Ho, Lop-Hing Sharp subelliptic estimates for $n-1$ forms on finite type domains. (English summary) **2003j:35236**
Kohn, Joseph J. Superlogarithmic estimates on pseudoconvex domains and CR manifolds. (English summary) **2003i:32059**
Lieb, Ingo (*with* Michel, Joachim) ★ The Cauchy-Riemann complex. (English summary) **2003b:32008**
Lin, Liang Yu *see* **Gan, Ning, 2003c:32003**
Mazzilli, Emmanuel *see* **Diederich, Klas, 2003b:32006**
McNeal, Jeffery D. L^2 harmonic forms on some complete Kähler manifolds. **2003f:32030**
Michel, Joachim *see* **Lieb, Ingo, 2003b:32008**
Ounaies, Myriam On interpolating discrete varieties for weighted spaces of entire functions. (English and Russian summaries) **2003m:32005**
Zhong, Chun Ping Integral representations for differential forms of type (p,q) in terms of the Hodge $*$-operator, the $\overline{\partial}$-operator and its formal adjoint ϑ on $\mathbf{C}^n$. (Chinese. English and Chinese summaries) **2003e:32005**

32W10 $\overline{\partial}_b$ and $\overline{\partial}_b$-Neumann operators

Brinkschulte, Judith Local exactness of top-degree forms in abstract Cauchy-Riemann complexes. (English summary) **2003m:32036**
Hill, C. Denson (*with* Nacinovich, Mauro) On the failure of the Poincaré lemma for the $\overline{\partial}_M$ complex. **2003g:32056**
Kohn, Joseph J. Hypoellipticity at non-subelliptic points. (English summary) **2003d:32049**
— Superlogarithmic estimates on pseudoconvex domains and CR manifolds. (English summary) **2003i:32059**
Ma, Lan ★ Homotopy formulas for the tangential Cauchy-Riemann complex on real hypersurfaces in $\mathbb{C}^n$. **2003h:32060**
Nacinovich, Mauro *see* **Hill, C. Denson, 2003g:32056**

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Brinkschulte, Judith Laufer's vanishing theorem for embedded CR manifolds. (English summary) **2003b:32039**
Darko, Patrick W. Sobolev cohomology for locally polycylindrical domains. (English summary) **2003b:32043**
Dzhumabaev, D. Kh. *see* **Khudaĭberganov, G., 2003i:34013**

Epstein, Charles L. Geometric bounds on the relative index. (English summary) **2003m:32034**
Harris, Adam (*with* Tonegawa, Yoshihiro) L^p-curvature and the Cauchy-Riemann equation near an isolated singular point. (English summary) **2003a:32014**
Khudaĭberganov, G. (*with* Dzhumabaev, D. Kh.) A jump theorem for the $\overline{\partial}$-normal derivative of the Bochner-Martinelli integral in domains with a piecewise-smooth boundary. (Russian. English and Uzbek summaries) **2003i:34013**
Laurent-Thiébaut, Christine Isomorphisme de Dolbeault et dualité de Serre dans les variétés CR. [Dolbeault isomorphism and Serre duality in CR manifolds] **2003k:32049**
Tonegawa, Yoshihiro *see* **Harris, Adam**, **2003a:32014**
Wang, Wei[11] Osculating CR manifolds by nilpotent Lie groups in the theory of several complex variables. (English summary) **2003f:32045**

32W20 Complex Monge-Ampère operators

Cegrell, Urban Explicit calculation of a Monge-Ampère measure. (English summary) **2003j:32047**
Darko, Patrick W. Continuous and L^p estimates for the complex Monge-Ampère equation on bounded domains in $\mathbb{C}^n$. (English summary) **2003h:32061**
Donaldson, S. K. Holomorphic discs and the complex Monge-Ampère equation. **2003m:32037**
Guan, Pengfei The extremal function associated to intrinsic norms. (English summary) **2003m:32038**
Ivarsson, Björn Interior regularity of solutions to a complex Monge-Ampère equation. (English summary) **2003i:32060**

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Boucksom, Sébastien On the volume of a line bundle. (English summary) **2003j:32025**
Chen, Xiuxiong The space of Kähler metrics. (English summary) **2003b:32031**
Favorov, S. Yu. (*with* Rashkovskiĭ, A. Yu.; Ronkin, L. I.) Almost periodic currents, chains and divisors in tube domains. (English summary) **2003a:32010**
Kołodziej, Sławomir Equicontinuity of families of plurisubharmonic functions with bounds on their Monge-Ampère masses. (English summary) **2003f:32043**
Koskenoja, Mika Pluripotential theory and capacity inequalities. **2003f:32044**
Rashkovskiĭ, A. Yu. *see* **Favorov, S. Yu. et al.**, **2003a:32010**
Ronkin, L. I. *see* **Favorov, S. Yu. et al.**, **2003a:32010**
Stenzel, Matthew B. Orbits of the geodesic flow and chains on the boundary of a Grauert tube. (English summary) **2003h:32047**
Wikström, Frank Partial harmonicity of continuous maximal plurisubharmonic functions. (English summary) **2003a:32053**

32W30 Heat kernels in several complex variables

Ueki, N. Estimates on the heat kernel of the Pauli Hamiltonian and its application to problems on hypoellipticity of the $\overline{\partial}_b$-Laplacian. (English summary) **2003g:32057**

Items with secondary classifications in 32W30

Chang, Der-Chen On the boundary of Fourier and complex analysis: the Pompeiu problem. (English summary) **2003c:32007**
Hein, Georg Computing Green currents via the heat kernel. **2003a:32011**

32W50 Other partial differential equations of complex analysis

Berndtsson, Bo An eigenvalue estimate for the $\overline{\partial}$-Laplacian. (English summary) **2003j:32048**
Calderón-Moreno, María Del Carmen Universality of the composition–partial differential operator in the unit ball in $\mathbb{C}^N$. (Spanish. Spanish summary) **2003c:32037**
Dzhuraev, Abdukhamid Dzhuraevich On the properties of some first-order systems that are elliptic in the unit ball $\mathbb{C}^2$ and degenerate on the boundary. (Russian) **2003h:32062**
Hayashi, Yasuo A nonlinear Cauchy-Riemann system in several complex variables. (English summary) **2003h:32063**
– Existence of generalized Cauchy-Riemann side-systems in several complex variables. (English summary) **2003h:32064**
Molzon, Robert (*with* Tamanoi, Hirotaka) Generalized Schwarzians in several variables and Möbius invariant differential operators. (English summary) **2003k:32053**
Tamanoi, Hirotaka *see* **Molzon, Robert**, **2003k:32053**

Items with secondary classifications in 32W50

Begehr, Heinrich G. W. (*with* Dai, Dao Qing; Dzhuraev, Abdukhamid Dzhuraevich) Integral representations for inhomogeneous over-determined second order system of several complex equations. (English summary) **2003c:35124**
– Pompeiu operators in complex, hypercomplex, and Clifford analysis. **2003a:30056**
Braverman, Maxim Cohomology of the Mumford quotient. (English summary) **2003k:32030**
Buraczewski, Dariusz (*with* Damek, Ewa; Hulanicki, Andrzej) Bounded pluriharmonic functions on symmetric irreducible Siegel domains. (English summary) **2003d:32025**
Dai, Dao Qing *see* **Begehr, Heinrich G. W. et al.**, **2003c:35124**
Damek, Ewa *see* **Buraczewski, Dariusz et al.**, **2003d:32025**
Domenichino, Cyrille Converse of spherical mean-value property for invariant harmonic functions. (English summary) **2003d:32007**
Dzhuraev, Abdukhamid Dzhuraevich *see* **Begehr, Heinrich G. W. et al.**, **2003c:35124**
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Malaspina, Angelica A brothers Riesz theorem in the theory of holomorphic functions of several complex variables. **2003e:32010**
Mamourian, A. (*with* Taghizadeh, N.) Generalization of a first order non-linear complex elliptic systems of partial differential equations in Sobolev space. (English summary) **2003j:30072**
Ōuchi, Sunao The behaviors of singular solutions of partial differential equations in some class in the complex domain. (English summary) **2003m:35007**
Taghizadeh, N. *see* **Mamourian, A.**, **2003j:30072**

33–XX Special functions {For orthogonal functions, see 42Cxx; for aspects of combinatorics see 05Axx; for number-theoretic aspects see 11–XX; for representation theory see 22Exx.}

33–01 Instructional exposition (textbooks, tutorial papers, etc.)

Items with secondary classifications in 33–01

Brouwer, Andries E. Automatic summation using Zeilberger-Wilf theory. (Dutch summary)
Chaos-Cador, L. (*with* Ley-Koo, E.) Mathieu functions revisited: matrix evaluation and generating functions. (English and Spanish summaries) **2003d:33042**
Ley-Koo, E. *see* **Chaos-Cador, L., 2003d:33042**

33–02 Research exposition (monographs, survey articles)

Anderson, G. D. (*with* Vamanamurthy, M. K.; Vuorinen, M. K.) Topics in special functions. (English summary) **2003e:33001**
Brillhart, John *see* **Lomont, J. S., 2003h:33001**
Lomont, J. S. (*with* Brillhart, John) ★ Elliptic polynomials. (English summary) **2003h:33001**
Opdam, Eric M. ★ Lecture notes on Dunkl operators for real and complex reflection groups. (English summary) **2003c:33001**
(Oshima, Toshio) *see* **Opdam, Eric M., 2003c:33001**
Vamanamurthy, M. K. *see* **Anderson, G. D. et al., 2003e:33001**
Vuorinen, M. K. *see* **Anderson, G. D. et al., 2003e:33001**

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Agarwal, Ratan Prakash An attempt towards presenting an unified theory for mock theta functions. **2003m:33020**
Agarwal, Ravi P. (*with* Milovanović, Gradimir V.) Extremal problems, inequalities, and classical orthogonal polynomials. (English summary) **2003d:33012**
Area, I. *see* **Ronveaux, A. et al., (2003h:81004)**
Balasubramanian, Ramachandran (*with* Ponnusamy, S.; Vuorinen, M. K.) On hypergeometric functions and function spaces. (English summary) **2003a:33011**
Chaudhry, Muhammad Aslam (*with* Zubair, Syed M.) ★ On a class of incomplete gamma functions with applications. (English summary) **2003c:33006**
van Diejen, J. F. (*with* Spiridonov, V. P.) Elliptic beta integrals and modular hypergeometric sums: an overview. (English summary) **2003j:33061**
Godoy, E. *see* **Ronveaux, A. et al., (2003h:81004)**
Khériji, L. (*with* Maroni, P.) The H_q-classical orthogonal polynomials. (English summary) **2003d:33039**
Koelink, H. Tjerk Lie theory and special functions. (English summary) **2003j:33044**
Maroni, P. *see* **Khériji, L., 2003d:33039**
Milne, Stephen C. Transformations of $U(n+1)$ multiple basic hypergeometric series. (English summary) **2003a:33037**
Milovanović, Gradimir V. *see* **Agarwal, Ravi P., 2003d:33012**
Ponnusamy, S. *see* **Balasubramanian, Ramachandran et al., 2003a:33011**
Ronveaux, A. (*with* Zarzo, A.; Area, I.; Godoy, E.) Expansion of hypergeometric polynomials: several approaches. (*see* **2003h:81004**)
Spiridonov, V. P. Elliptic beta integrals and special functions of hypergeometric type. (English summary) **2003b:33019**
— *see also* **van Diejen, J. F., 2003j:33061**
Vuorinen, M. K. *see* **Balasubramanian, Ramachandran et al., 2003a:33011**
Zarzo, A. *see* **Ronveaux, A. et al., (2003h:81004)**
Zubair, Syed M. *see* **Chaudhry, Muhammad Aslam, 2003c:33006**

33–03 Historical (must also be assigned at least one classification number from Section 01)

Askey, R. Ramanujan and hypergeometric and basic hypergeometric series [MR 92k:01019]. (English summary) (*see* **2003a:01024**)
(Ramanujan, Srinivasa Aiyangar) *see* **Askey, R., (2003a:01024)**

Items with secondary classifications in 33–03

Barbin, Évelyne (*with* Guitart, René) Algèbre des fonctions elliptiques et géométrie des ovales cartésiennes. (English and French summaries) [Algebra of elliptic functions and geometry of Cartesian ovals] **2003j:01011**
(Berndt, Bruce C.) *see* **Ramanujan: essays and surveys, 2003a:01024**
Guitart, René *see* **Barbin, Évelyne, 2003j:01011**
(Ramanujan, Srinivasa Aiyangar) *see* **Ramanujan: essays and surveys, 2003a:01024**
(Rankin, Robert Alexander) *see* **Ramanujan: essays and surveys, 2003a:01024**
Veselý, Jiří Remarks on the history of the gamma function. (Czech) **2003e:01047**

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Biography:
Ramanujan, Srinivasa Aiyangar ★ Ramanujan: essays and surveys. **2003a:01024**
Ramanujan: essays and surveys ★ Ramanujan: essays and surveys. **2003a:01024**

33–04 Explicit machine computation and programs (not the theory of computation or programming)

Items with secondary classifications in 33–04

Laushnyk, Oksana *see* **Popov, Bogdan, 2003g:65016**
Popov, Bogdan (*with* Laushnyk, Oksana) Selection of iterative algorithm and starting approximation for functions evaluation. (English summary) **2003g:65016**

33–06 Proceedings, conferences, collections, etc.

Items listed otherwise than by author

Conference:
Special Functions ★ {Conference on Special Functions}.
Tempe, AZ ★ {Conference on Special Functions}.

Items with secondary classifications in 33–06

(Denis, Remy Y.) *see* **Proceedings: Conference of the Society for Special Functions and their Applications (SSFA), 2003g:00022** *and* **2003g:00023**
(Pathan, M. A.) *see* **Proceedings: Conference of the Society for Special Functions and their Applications (SSFA), 2003g:00022** *and* **2003g:00023**

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Lucknow ★ Proceedings of the Second International Conference of the Society for Special Functions and their Applications (SSFA). Vol. II. **2003g:00022**
— ★ Proceedings of the Second International Conference of the Society for Special Functions and their Applications (SSFA). **2003g:00023**
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— ★ Proceedings of the Second International Conference of the Society for Special Functions and their Applications (SSFA). **2003g:00023**

33Bxx Elementary classical functions

33B10 Exponential and trigonometric functions

Al-Sirehy, Fatma *see* **Fisher, Brian, 2003c:33002** *and* **2003c:33003**
Chen, Hongwei On some trigonometric power sums. (English summary) **2003d:33001**
Fisher, Brian (*with* Al-Sirehy, Fatma) On the cosine integral and the convolution. (English summary) **2003c:33003**
— (*with* Al-Sirehy, Fatma) On the sine integral and the convolution. (English summary) **2003c:33002**
— *see also* **Jolevska-Tuneska, Biljana, 2003d:33002**
Jolevska-Tuneska, Biljana (*with* Fisher, Brian) The cosine integral and the commutative neutrix convolution. (English summary) **2003d:33002**
Nishimoto, Katsuyuki Some representations for $\log r$ $(2 \le r \in \mathbf{Z}^+)$. (English summary) **2003d:33003**
Srivastava, Hari M. *see* **Takano, Katsuo, 2003j:33001**
Takano, Katsuo (*with* Srivastava, Hari M.) Remarks on some families of trigonometric sums. (English summary) **2003j:33001**

Items with secondary classifications in 33B10

Aleixo, A. N. F. (*with* Balantekin, A. B.; Cândido Ribeiro, M. A.) Completeness of coherent states associated with self-similar potentials and Ramanujan's integral extension of the beta function. (English summary) **2003m:81110**
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33B15 Gamma, beta and polygamma functions

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33B20 Incomplete beta and gamma functions (error functions, probability integral, Fresnel integrals)

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— (*with* Qadir, Asghar; Zubair, Syed M.) Generalized error functions with applications to probability and heat conduction. (English summary) **2003j:33005**
— (*with* Zubair, Syed M.) Extended incomplete gamma functions with applications. (English summary) **2003j:33006**
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Straton, Jack C. The incomplete gamma function expressed as a sum of Macdonald functions. (English summary) **2003c:33007**
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Qi, Feng Monotonicity results and inequalities for the gamma and incomplete gamma functions. (English summary) **2003d:33004**
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33B30 Higher logarithm functions

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Special values of multiple polylogarithms. (English summary) **2003i:33003**
Bradley, David M. *see* **Borwein, Jonathan M. et al., 2003i:33003**
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33Cxx Hypergeometric functions

33C05 Classical hypergeometric functions, ${}_2F_1$

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Boggs, Kathryn (*with* Duren, Peter L.) Zeros of hypergeometric functions. (English summary) **2003k:33003**
Chan, Heng Huat (*with* Chua, Kok Seng; Solé, Patrick) Quadratic iterations to π associated with elliptic functions to the cubic and septic base. (English summary) **2003j:33008**
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Dixit, Kaushal Kishore (*with* Pathak, A. L.) Starlike and uniform convexity properties for hypergeometric function. (English summary) **2003m:33002**
Driver, Kathy (*with* Möller, Manfred) Quadratic and cubic transformations and zeros of hypergeometric polynomials. (English summary) **2003d:33006**
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Hata, Masayoshi (*with* Huttner, Marc) Padé approximation to the logarithmic derivative of the Gauss hypergeometric function. (English summary) **2003j:33009**
Huttner, Marc *see* **Hata, Masayoshi, 2003j:33009**
Khan, Subuhi *see* **Pathan, M. A., 2003g:33002** *and* **2003g:33003**
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Mukherjee, M. C. On extension of mixed trilateral generating function of hypergeometric polynomial. (English summary)
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Boylan, Matthew Congruences for ${}_2F_1$ hypergeometric functions over finite fields. (English summary) **2003f:11186**
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Cho, Nak Eun (*with* Woo, Soon Young; Owa, Shigeyoshi) Uniform convexity properties for hypergeometric functions. (English summary) **2003g:30015**
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Huttner, Marc (*with* Matala-aho, Tapani) Diophantine approximations for a constant related to elliptic functions. (English summary) **2003c:11084**
Jellal, Ahmed Coherent states for generalized Laguerre functions. (English summary) **2003f:81121**
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Larcombe, Peter J. On Bullard's "delta" parameter: properties of a special case. (English summary) **2003m:05006**
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33C50 Orthogonal polynomials and functions in several variables expressible in terms of special functions in one variable

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33C52 Orthogonal polynomials and functions associated with root systems

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33C55 Spherical harmonics

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33C60 Hypergeometric integrals and functions defined by them (E, G and H functions)

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33C67 Hypergeometric functions associated with root systems

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33C75 Elliptic integrals as hypergeometric functions

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33C80 Connections with groups and algebras, and related topics

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33D50 Orthogonal polynomials and functions in several variables expressible in terms of basic hypergeometric functions in one variable

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33E10 Lamé, Mathieu, and spheroidal wave functions

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33E12 Mittag-Leffler functions and generalizations

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33E20 Other functions defined by series and integrals

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Aomoto, Kazuhiko (*with* Iguchi, Kazumoto) On quasi-hypergeometric functions. (English summary) **2003d:33044**
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33E50 Special functions in characteristic p (gamma functions, etc.)

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33E99 None of the above, but in this section

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33Fxx Computational aspects

33F05 Numerical approximation [see also 65D20]

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Gautschi, Walter Computation of Bessel and Airy functions and of related Gaussian quadrature formulae. (English summary) **2003d:33010**

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Paris, R. B. On the use of Hadamard expansions in hyperasymptotic evaluation. I. Real variables. (English summary) **2003b:33005**

— On the use of Hadamard expansions in hyperasymptotic evaluation. II. Complex variables. (English summary) **2003b:33006**

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Popov, Bogdan (*with* Laushnyk, Oksana) Selection of iterative algorithm and starting approximation for functions evaluation. (English summary) **2003g:65016**

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Remiddi, E. *see* **Gehrmann, T., 2003f:65037**

Segura, Javier *see* **Gil, Amparo et al., 2003e:33007** *and* **2003g:33004**

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Zhao, Yu-Qiu A uniform asymptotic expansion of the single variable Bell polynomials. (English summary) **2003m:41051**

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33F10 Symbolic computation (Gosper and Zeilberger algorithms, etc.) [see also 68W30]

Abramov, S. A. (*with* Geddes, K. O.; Le, H. Q.) Computer algebra library for the construction of the minimal telescopers. (English summary) (*see* **2003d:00014**)

— (*with* Petkovšek, Marko) On the structure of multivariate hypergeometric terms. (English summary) **2003m:33028**

Andrews, George E. (*with* Knopfmacher, Arnold; Paule, Peter; Prodinger, Helmut) q-Engel series expansions and Slater's identities. (English summary) **2003d:33045**

Brouwer, Andries E. Automatic summation using Zeilberger-Wilf theory. (Dutch summary)

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— *see also* **Abramov, S. A. et al., (2003d:00014)**

Isoni, Tiziana (*with* Natalini, Pierpaolo; Ricci, Paolo Emilio) Symbolic computation of Newton sum rules for the zeros of polynomial eigenfunctions of linear differential operators. (English summary) **2003d:33046**

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Le, H. Q. On the q-analogue of Zeilberger's algorithm for rational functions. (Russian. Russian summary) **2003b:33038**

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Paule, Peter *see* **Andrews, George E. et al., 2003d:33045**

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Riese, Axel Fine-tuning Zeilberger's algorithm. The methods of automatic filtering and creative substituting. (English summary) **2003f:33034**

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Camargo Brunetto, Maria A. O. Using computer algebra and Chebyshev polynomials for counting polynomial zeros in a circle. (English summary) **2003b:33022**

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Ciucu, Mihai (*with* Krattenthaler, Christian F.) A non-automatic (!) application of Gosper's algorithm evaluates a determinant from tiling enumeration. (English summary) **2003i:05008**

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Liakhovetski, G. V. An algorithm for a series expansion of the Meijer G-function. (English summary) **2003d:33026**

Natalini, Pierpaolo *see* **Isoni, Tiziana et al., 2003b:33037**

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Ryabenko, A. A. Formal solutions of linear ordinary differential equations containing m-hypergeometric series. (Russian. Russian summary) **2003g:34009**

Santos, José Plínio De O. On the combinatorics of polynomial generalizations of Rogers-Ramanujan-type identities. (English summary) **2003i:11150**

Temme, Nico M. *see* **Vidunas, Raimundas, 2003c:41041**

Vidunas, Raimundas (*with* Temme, Nico M.) Symbolic evaluation of coefficients in Airy-type asymptotic expansions. (English summary) **2003c:41041**

— A generalization of Kummer's identity. (English summary) **2003j:33011**

34–XX Ordinary differential equations

34–01 Instructional exposition (textbooks, tutorial papers, etc.)

(Bates, Peter W.) *see* **Hartman, Philip, 2003h:34001**
Hartman, Philip ★ Ordinary differential equations. (English summary) **2003h:34001**
Mattheij, R. M. M. (*with* Molenaar, Jaap) ★ Ordinary differential equations in theory and practice. **2003k:34001**
Molenaar, Jaap *see* **Mattheij, R. M. M., 2003k:34001**
Sánchez, David A. ★ Ordinary differential equations. (English summary) **2003b:34001**

Items with secondary classifications in 34–01

Bornemann, Folkmar A. *see* **Deuflhard, Peter, 2003e:65001**
Deuflhard, Peter (*with* Bornemann, Folkmar A.) ★ Scientific computing with ordinary differential equations. (English summary) **2003e:65001**
Marasco, Addolorata (*with* Romano, Antonio) ★ Scientific computing with Mathematica®. (English summary) **2003h:34002**
(Rheinboldt, Werner C.) *see* **Deuflhard, Peter, 2003e:65001**
Romano, Antonio *see* **Marasco, Addolorata, 2003h:34002**

34–02 Research exposition (monographs, survey articles)

Il′yashenko, Yulii S. Centennial history of Hilbert's 16th problem. (English summary) **2003c:34001**
Lantsman, M. Kh. ★ Asymptotics of linear differential equations. (English summary) **2003b:34002**
Li, Ji-bin Hilbert's 16th problem and bifurcations of planar polynomial vector fields. (English summary) **2003k:34002**
Nayfeh, Ali H. ★ Nonlinear interactions. (English summary) **2003c:34002**

Items with secondary classifications in 34–02

Brown, Richard C. (*with* Hinton, Don B.) Lyapunov inequalities and their applications. (English summary) **2003c:34041**
Hinton, Don B. *see* **Brown, Richard C., 2003c:34041**
Lehman, Brad The influence of delays when averaging slow and fast oscillating systems: overview. (English summary) **2003c:34128**
Ren, Hong-Shan Exact solutions of a linear functional differential equation. (English summary) **2003c:34107**

34–03 Historical (must also be assigned at least one classification number from Section 01)

Martynyuk, A. A. *see* **Mitropol′skiĭ, Yuriĭ Alekseevich et al., (2003m:34001)**
Mitropol′skiĭ, Yuriĭ Alekseevich (*with* Martynyuk, A. A.; Zhukovskiĭ, V. I.) A survey of Starzhinskii's works on stability of periodic motions and nonlinear oscillations. (*see* **2003m:34001**)
Pechenkin, A. A. The concept of self-oscillations and the rise of synergetics ideas in the theory of nonlinear oscillations. (English summary) **2003d:34001**
Zhukovskiĭ, V. I. *see* **Mitropol′skiĭ, Yuriĭ Alekseevich et al., (2003m:34001)**

Items with secondary classifications in 34–03

(Abraham, Ralph H.) *see* **Chaos avant-garde, 2003e:37002**
(Aleksandrov, Viktor Mikhaĭlovich) *see* **Andrianov, Igor V., 2003m:34122**
(d'Alembert, Jean le Rond) *see* **Nakata, Ryoichi, 2003k:01011**
Allaire, Patricia R. (*with* Bradley, Robert E.) Symbolical algebra as a foundation for calculus: D. F. Gregory's contribution. (English and French summaries) **2003m:01032**
Andrianov, Igor V. (*with* Manevich, L. I.) ★ Asymptotology. (English summary) **2003m:34122**
Aubin, David (*with* Dahan Dalmedico, Amy) Writing the history of dynamical systems and chaos: longue durée and revolution, disciplines and cultures. (English and French summaries) **2003k:37003**
(Barantsev, Rem G.) *see* **Andrianov, Igor V., 2003m:34122**
Bradley, Robert E. *see* **Allaire, Patricia R., 2003m:01032**
(Clairaut, Alexis-Claude) *see* **Nakata, Ryoichi, 2003k:01011**
Dahan Dalmedico, Amy *see* **Aubin, David, 2003k:37003**
Efimova, Elena Anatol′evna On the development of symbolic calculus in the last third of the 19th century. (Russian. English summary) **2003f:01024**
(Euler, Leonhard) *see* **Nakata, Ryoichi, 2003k:01011**
(Gregory, D. F.) *see* **Allaire, Patricia R., 2003m:01032**
(Hazewinkel, Michiel) *see* **Andrianov, Igor V., 2003m:34122**
Hersh, Reuben The birth of random evolutions.
Manevich, L. I. *see* **Andrianov, Igor V., 2003m:34122**
Martynyuk, A. A. Some results of the development of the theories of stability of motion: classical and modern. (Russian. English and Ukrainian summaries) **2003c:34082**
Nakata, Ryoichi The general principles for resolving mechanical problems in d'Alembert, Clairaut and Euler. **2003k:01011**
Pelczar, Andrzej Differential equations in Poland. An outline of their history until the mid-seventies of the twentieth century. (Polish) **2003c:01055**
(Shamrovsky, Alexander D.) *see* **Andrianov, Igor V., 2003m:34122**
(Ueda, Yoshisuke) *see* **Chaos avant-garde, 2003e:37002**

Items listed otherwise than by author

Biography:
Gregory, Duncan Farquharson *see* **Allaire, Patricia R., 2003m:01032**
Chaos avant-garde ★ The chaos avant-garde. **2003e:37002**

34–04 Explicit machine computation and programs (not the theory of computation or programming)

Marasco, Addolorata (*with* Romano, Antonio) ★ Scientific computing with Mathematica®. (English summary) **2003h:34002**
Romano, Antonio *see* **Marasco, Addolorata, 2003h:34002**

Items with secondary classifications in 34–04

Abad, Alberto (*with* Gavín, Ángel; San Juan, Juan Félix) Analysis and automation of various averaging methods. (Spanish. English summary) (*see* **2003a:00031**)
Ampilova, N. B. (*with* Petrenko, E.) An algorithm for the computer modeling of the Julia set in the case of a parabolic fixed point. (Russian. English and Russian summaries) **2003b:37071**
Barnes, Belinda (*with* Fulford, Glenn R.) ★ Mathematical modelling with case studies. **2003m:34110**
Belanger, Jay (*with* Hausdorf, Marcus; Seiler, Werner M.) A MuPAD library for differential equations. (English summary) **2003k:68130**
Bronstein, Manuel Computer algebra algorithms for linear ordinary differential and difference equations. (English summary) **2003d:68268**
Chemlal, Rezki *see* **Makhlouf, Amar, 2003e:34059**
Dai, Shi Qiang Poincaré-Lighthill-Kuo method and symbolic computation. (Chinese. English and Chinese summaries) **2003d:68269**
Duarte, L. G. S. (*with* Duarte, S. E. S.; da Mota, L. A. C. P.; Skea, J. E. F.) An extension of the Prelle-Singer method and a Maple implementation. (English summary) **2003a:34006**
Duarte, S. E. S. *see* **Duarte, L. G. S. et al., 2003a:34006**
Ermentrout, George Bard ★ Simulating, analyzing, and animating dynamical systems. (English summary) **2003i:37085**
Favretto, L. *see* **Hsu, Liu et al., 2003d:34088**
Fulford, Glenn R. *see* **Barnes, Belinda, 2003m:34110**
Gavín, Ángel *see* **Abad, Alberto et al., (2003a:00031)**
Hausdorf, Marcus *see* **Belanger, Jay et al., 2003k:68130**
Hsu, Liu (*with* Min, L. J.; Favretto, L.) A recursive approach to compute normal forms. (English summary) **2003d:34088**
Kugi, Andreas *see* **Schlacher, Kurt, 2003a:34004** *and* **2003f:34004**
Makhlouf, Amar (*with* Chemlal, Rezki) Study of the Mathieu's equation. (English summary) **2003e:34059**
Min, L. J. *see* **Hsu, Liu et al., 2003d:34088**
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Ryabenko, A. A. Formal solutions of linear ordinary differential equations containing m-hypergeometric series. (Russian. Russian summary) **2003g:34009**
San Juan, Juan Félix *see* **Abad, Alberto et al., (2003a:00031)**
Schlacher, Kurt (*with* Kugi, Andreas) Symbolic methods for systems of implicit ordinary differential equations. (English summary) **2003a:34004**
— (*with* Kugi, Andreas) Symbolic methods for systems of implicit ordinary differential equations. (English summary) **2003f:34004**
Seiler, Werner M. *see* **Belanger, Jay et al., 2003k:68130**
Skea, J. E. F. *see* **Duarte, L. G. S. et al., 2003a:34006**
Wolf, Thomas Otto A comparison of four approaches to the calculation of conservation laws. (English summary) **2003a:35129**
Yu, Pei[1] (*with* Yuan, Yuan[2]) An efficient method for computing the simplest normal forms of vector fields. (English summary) **2003k:34080**
Yuan, Yuan[2] *see* **Yu, Pei[1], 2003k:34080**

34–06 Proceedings, conferences, collections, etc.

(di Bernardo, Mario) *see* **Special Issue: Non-smooth dynamical systems, theory and applications**
(Champneys, Alan R.) *see* **Special Issue: Non-smooth dynamical systems, theory and applications**
(Drakhlin, Mikhail E.) *see* **Conference: Differential and Functional Differential Equations**
(Homer, Martin) *see* **Special Issue: Non-smooth dynamical systems, theory and applications**
(Laine, Ilpo) *see* **Complex differential and functional equations, 2003j:34001**
(Leach, Peter G. L.) *see* **Special Issue: Leach, Peter G. L.**
(Litsyn, Elena) *see* **Conference: Differential and Functional Differential Equations**
(Mahomed, Fazal M.) *see* **Special Issue: Leach, Peter G. L.**
(Martynyuk, A. A.) *see* **Advances in stability theory at the end of the 20th century, 2003m:34001**
(Sree Hari Rao, V.) *see* **Special Issue: Neural networks and neurocomputing—theory, models, and applications**
(Wu, Jian Hong) *see* **Special Issue: Neural networks and neurocomputing—theory, models, and applications**
(Zou, Xing Fu) *see* **Special Issue: Neural networks and neurocomputing—theory, models, and applications**

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Advances in stability theory at the end of the 20th century ★ Advances in stability theory at the end of the 20th century. **2003m:34001**
Complex differential and functional equations ★ Complex differential and functional equations. **2003j:34001**
Conference:
Differential and Functional Differential Equations ★ {International Conference on Differential and Functional Differential Equations}.
Festschrift:
Leach, Peter G. L. ★ Special issue in honour of P. G. L. Leach on the occasion of his 60th birthday.
Mekrijärvi ★ Complex differential and functional equations. **2003j:34001**
Moscow ★ {International Conference on Differential and Functional Differential Equations}.

Special Issue:
Leach, Peter G. L. ★ Special issue in honour of P. G. L. Leach on the occasion of his 60th birthday.
Neural networks and neurocomputing—theory, models, and applications ★ New millennium special issue on neural networks and neurocomputing—theory, models, and applications. Part I.
Non-smooth dynamical systems, theory and applications ★ Special issue: Non-smooth dynamical systems, theory and applications.

Items with secondary classifications in 34–06

(Azbelev, Nikolai Viktorovich) *see* **Dedicated to L. F. Rakhmatullina and N. V. Azbelev on the occasion of their seventieth and eightieth birthdays**
(Blekhman, I. I.) *see* **Special Issue: Chaos synchronization and control**
(Bohner, Martin) *see* **In honour of Professor Allan Peterson on the occasion of his 60th birthday**
(Brown, B. Malcolm) *see* **On the occasion of the 65th birthday of Professor Michael Eastham**
(Eastham, M. S. P.) *see* **On the occasion of the 65th birthday of Professor Michael Eastham**
(Evans, William Desmond) *see* **On the occasion of the 65th birthday of Professor Michael Eastham**
(Fradkov, A. L.) *see* **Special Issue: Chaos synchronization and control**
(Galperin, Efim A.) *see* **Lyapunov's methods in stability and control**
(Graef, John R.) *see* **Proceedings: Conference on Differential Equations and Computational Simulations, 2003m:65006**
(Gravvanis, George A.) *see* **Colloquium: Differential Equations**
(Henderson, Johnny) *see* **In honour of Professor Allan Peterson on the occasion of his 60th birthday**
(Kolev, Dimitar A.) *see* **Colloquium: Differential Equations**
(Krbec, Miroslav) *see* **Proceedings: EQUADIFF**
(Mosekilde, Erik) *see* **Special Issue: Chaos synchronization and control**
(Nenov, Svetoslav Ivanov) *see* **Colloquium: Differential Equations**
(Peterson, Allan) *see* **In honour of Professor Allan Peterson on the occasion of his 60th birthday**
(Rakhmatullina, L. F.) *see* **Dedicated to L. F. Rakhmatullina and N. V. Azbelev on the occasion of their seventieth and eightieth birthdays**
(Shivaji, Ratnasingham) *see* **Proceedings: Conference on Differential Equations and Computational Simulations, 2003m:65006**
(Soni, Bharat) *see* **Proceedings: Conference on Differential Equations and Computational Simulations, 2003m:65006**
(Zhu, Jian Ping[2]) *see* **Proceedings: Conference on Differential Equations and Computational Simulations, 2003m:65006**

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Colloquium:
Differential Equations ★ Twelfth International Colloquium on Differential Equations.
— ★ Twelfth International Colloquium on Differential Equations.
— ★ Twelfth International Colloquium on Differential Equations.
Conference:
Control of Oscillations and Chaos ★ Special issue: Chaos synchronization and control.
Differential Equations and their Applications ★ Proceedings of EQUADIFF 10.
Dynamics of Continuous, Discrete and Impulsive Systems ★ {Second International Conference on Dynamics of Continuous, Discrete and Impulsive Systems}.
Dedicated to L. F. Rakhmatullina and N. V. Azbelev on the occasion of their seventieth and eightieth birthdays ★ Dedicated to L. F. Rakhmatullina and N. V. Azbelev on the occasion of their seventieth and eightieth birthdays.
Dynamics of functional equations and related topics ★ Kansū hōteishiki no kai no dainamikusu to sono shūhen. [Dynamics of functional equations and related topics]
Festschrift:
Azbelev, Nikolaĭ Viktorovich ★ Dedicated to L. F. Rakhmatullina and N. V. Azbelev on the occasion of their seventieth and eightieth birthdays.
Eastham, Michael S. P. ★ On the occasion of the 65th birthday of Professor Michael Eastham.
Peterson, Allan C. ★ {In honour of Professor Allan Peterson on the occasion of his 60th birthday. Part II}.
Rakhmatullina, Lina Fazylovna ★ Dedicated to L. F. Rakhmatullina and N. V. Azbelev on the occasion of their seventieth and eightieth birthdays.
In honour of Professor Allan Peterson on the occasion of his 60th birthday ★ {In honour of Professor Allan Peterson on the occasion of his 60th birthday. Part II}.
London, ON ★ {Second International Conference on Dynamics of Continuous, Discrete and Impulsive Systems}.
Lyapunov's methods in stability and control ★ Lyapunov's methods in stability and control.
Mississippi State, MS ★ Proceedings of the Fifth Mississippi State Conference on Differential Equations and Computational Simulations. **2003m:65006**
On the occasion of the 65th birthday of Professor Michael Eastham ★ On the occasion of the 65th birthday of Professor Michael Eastham.
Plovdiv ★ Twelfth International Colloquium on Differential Equations.
— ★ Twelfth International Colloquium on Differential Equations.
— ★ Twelfth International Colloquium on Differential Equations.
Prague ★ Proceedings of EQUADIFF 10.
Proceedings:
Conference on Differential Equations and Computational Simulations ★ Proceedings of the Fifth Mississippi State Conference on Differential Equations and Computational Simulations. **2003m:65006**
EQUADIFF ★ Proceedings of EQUADIFF 10.
Special Issue:
Chaos synchronization and control ★ Special issue: Chaos synchronization and control.
St. Petersburg ★ Special issue: Chaos synchronization and control.

34Axx General theory

34A05 Explicit solutions and reductions

Abdul-Aziz, S. F. *see* **Khater, A. H. et al., 2003b:34005**
Al-Dosary, Khalil Ismail Order reduction of differential equations of second order. (English summary)
Calogero, Francesco On modified versions of some solvable ordinary differential equations due to Chazy. (English summary) **2003b:34003**
Chakravarty, Sarbarish (*with* Halburd, R. G.) First integrals and gradient flow for a generalized Darboux-Halphen system. (English summary) **2003m:34002**
El-Sayed, Ahmed M. A. (*with* Gaafar, Fatma M.) Fractional-order differential equations with memory and fractional-order relaxation-oscillation model. (English summary) **2003i:34001**
Emanuel, George ★ Solution of ordinary differential equations by continuous groups. (English summary) **2003g:34001**
Esposito, S. Majorana transformation for differential equations. (English summary) **2003k:34003**
Feng, Lu Xiang A generalization for a class of Abel differential equations. (Chinese. English and Chinese summaries)
Feng, Zhaosheng The algebraic curve solution for Riccati equations with polynomial coefficients. (English summary) **2003b:34004**
Gaafar, Fatma M. *see* **El-Sayed, Ahmed M. A., 2003i:34001**
Georgiev, Zh. D. *see* **Savov, V. N. et al., (2003b:00022)**
Halburd, R. G. *see* **Chakravarty, Sarbarish, 2003m:34002**
Ivanov, V. K. A method for the approximate solution in quadratures of some linear second-order ordinary differential equations with variable coefficients. (Russian. English and Russian summaries) **2003a:34001**
Khater, A. H. (*with* Moussa, M. H. M.; Abdul-Aziz, S. F.) The invariant variational principle and exact solutions for the generalized Sturm-Liouville equation and linear Dirac system. (English summary) **2003b:34005**
Levine, Lawrence E. (*with* Maleh, Ray) Polynomial solutions of Nth order non-homogeneous differential equations.
Li, Zhi Bin[1] (*with* Liu, Yin Ping[1]; Yao, Ruo-Xia) An automated algebraic method for finding exact solutions to nonlinear evolution equations. (English summary) (*see* **2003d:00014**)
— *see also* **Liu, Yin Ping[1]**
Liu, Yin Ping[1] (*with* Li, Zhi Bin[1]) Automated calculation for a class of exact solutions to nonlinear differential equations. (Chinese. English and Chinese summaries)
— *see also* **Li, Zhi Bin[1] et al., (2003d:00014)**
Maleh, Ray *see* **Levine, Lawrence E.**
Mandal, Swapan A simplified approach to the closed form approximate analytical solutions for classical and quantum oscillators of $(n+1)$th anharmonicity. (English summary) **2003m:34003**
Miyakoda, Tsuyako (*with* Nishimoto, Katsuyuki) N-method to some nonhomogeneous constant coefficients linear ordinary semi differential equations (continue). (English summary)
Moussa, M. H. M. *see* **Khater, A. H. et al., 2003b:34005**
Nishimoto, Katsuyuki N-method to some linear second order ordinary differential equations. (English summary)
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34A09 Implicit equations, differential-algebraic equations [see also 65L80]

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34A12 Initial value problems, existence, uniqueness, continuous dependence and continuation of solutions

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34B05 Linear boundary value problems

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34C10 Oscillation theory, zeros, disconjugacy and comparison theory

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34C11 Growth, boundedness, comparison of solutions

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34C15 Nonlinear oscillations, coupled oscillators

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34C40 Equations and systems on manifolds

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34C45 Method of integral manifolds

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34C55 Hysteresis

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34D09 Dichotomy, trichotomy

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34D10 Perturbations

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34D15 Singular perturbations

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34D20 Lyapunov stability

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34D30 Structural stability and analogous concepts [see also 37C20]

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34D40 Ultimate boundedness

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34Exx Asymptotic theory

34E05 Asymptotic expansions

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34Kxx Functional-differential and differential-difference equations, with or without deviating arguments [see also 37–XX]

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34K05 General theory

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34K07 Theoretical approximation of solutions

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34K10 Boundary value problems

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34K12 Growth, boundedness, comparison of solutions

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34Lxx Ordinary differential operators [see also 47E05]

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34L05 General spectral theory

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34L10 Eigenfunction expansions, completeness of eigenfunctions

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34L15 Estimation of eigenvalues, upper and lower bounds

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34L16 Numerical approximation of eigenvalues and of other parts of the spectrum

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34L20 Asymptotic distribution of eigenvalues, asymptotic theory of eigenfunctions

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34L25 Scattering theory

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34Mxx Differential equations in the complex domain [see also 30Dxx, 32G34]

34M05 Entire and meromorphic solutions

Cao, Chun Lei (*with* Chen, Zong Xuan) On the orders and zeros of the solutions of certain linear differential equations with entire coefficients. (Chinese. English and Chinese summaries) **2003g:34190**
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34M10 Oscillation, growth of solutions

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Chen, Zong Xuan On the hyper-order of solutions of some second-order linear differential equations. (English summary) **2003a:34150**
— The growth of solutions of $f'' + e^{-z}f' + Q(z)f = 0$ where the order $(Q) = 1$. (English summary) **2003d:34190**
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Gao, Ling Yun On the growth of solutions of higher-order algebraic differential equations. (English summary) **2003h:34183**
Gao, Shi An A result concerning complex oscillation for periodic second order linear differential equations of transcendental type. (Chinese. English and Chinese summaries) **2003e:34164**
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Li, Ye Zhou The growth of solutions of second-order differential equations in the unit disc. (Chinese. English and Chinese summaries) **2003m:34214**
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Laine, Ilpo *see* **Barsegyan, G. A. et al., 2003g:30040** *and* **Gromak, Valerii I. et al., 2003m:34210**
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34M15 Algebraic aspects (differential-algebraic, hypertranscendence, group-theoretical)

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Malek, Stéphane On the reducibility of the Schlesinger equations. (English summary) **2003i:34195**
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Moulin Ollagnier, Jean Liouvillian integration of the Lotka-Volterra system. (English summary) **2003f:34014**
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34M25 Formal solutions, transform techniques

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Verrill, Helena A. Picard-Fuchs equations of some families of elliptic curves. (English summary) **2003k:11065**

34M30 Asymptotics, summation methods

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— (*with* Mozo-Fernández, Jorge) Multisummability of formal solutions of singular perturbation problems. (English summary) **2003h:34185**
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Costin, Ovidiu (*with* Costin, Rodica D.) On the formation of singularities of solutions of nonlinear differential systems in antistokes directions. **2003f:34182**
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Kapaev, Andrei A. Lax pairs for Painlevé equations. **2003m:34216**
Lantsman, M. Kh. ★ Asymptotics of linear differential equations. (English summary) **2003b:34002**
Lu, Youmin A connection formula of the general fourth Painleve transcendent. (English summary) **2003h:34188**
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34M35 Singularities, monodromy, local behavior of solutions, normal forms

Bolibrukh, Andrei The Fuchs inequality on a compact Kähler manifold. (Russian) **2003a:34151**
— Multiplicities of zeros of the components of solutions of a system with regular singular points. (Russian. Russian summary) **2003i:34193**
Campos, L. M. B. C. On the extended hypergeometric equation and functions of arbitrary degree. (English summary) **2003c:34150**
Giorgadze, Gia On the monodromy representation of the elliptic system.
Haraoka, Yoshishige Integral local systems.
Kazakov, A. Ya. Symmetries of the confluent Heun equation. (Russian. English and Russian summaries) **2003i:34194**
Liţcanu, Răzvan Counting Lamé differential operators. (English summary) **2003h:34186**
Malek, Stéphane On the reducibility of the Schlesinger equations. (English summary) **2003i:34195**
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Ochiai, Hiroyuki Decomposition of vector-valued hypergeometric differential equations. (Japanese. Japanese summary)
Pyartli, A. S. Rational differential equations with commutative monodromy group at infinity. (Russian. Russian summary) **2003e:34166**
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Sobolevskiĭ, S. L. The small parameter method in the investigation of systems of differential equations for the Painlevé property. (Russian. English and Russian summaries) **2003j:34170**
Stepin, S. A. On the asymptotic behavior of solutions to second order ordinary differential equations. (English summary) **2003m:34215**
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Belyaev, A. V. The factorization of the flow defined by the Euler-Poisson's equations. (English summary) **2003j:70004**
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34M37 Resurgence phenomena

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34M45 Differential equations on complex manifolds

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35A15 Variational methods

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35Bxx Qualitative properties of solutions

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35B25 Singular perturbations

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35B34 Resonances

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35B35 Stability, boundedness

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35B42 Inertial manifolds

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35Gxx General higher-order equations and systems

35G05 General theory of linear higher-order PDE

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35H30 Quasi-elliptic equations

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35Jxx Partial differential equations of elliptic type [see also 58J10, 58J20]

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35J05 Laplace equation, reduced wave equation (Helmholtz), Poisson equation [see also 31Axx, 31Bxx]

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35J50 Variational methods for elliptic systems

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35J55 Boundary value problems for elliptic systems

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Alaa, N. (*with* Mounir, I.) Weak solutions for some reaction-diffusion systems with balance law and critical growth with respect to the gradient. (English summary) **2003c:35033**
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35J60 Nonlinear PDE of elliptic type

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Addou, A. (*with* Bentahar, B.; Chakrone, Omar) Nonresonance for a nonautonomous elliptic problem with respect to the conical Fučik spectrum. (English summary) **2003b:35058**
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Aduén, Hugo (*with* Castro, Alfonso) Infinitely many nonradial solutions to a superlinear Dirichlet problem. (English summary) **2003m:35056**
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35J70 Elliptic partial differential equations of degenerate type

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35J99 None of the above, but in this section

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35Kxx Parabolic equations and systems [see also 35Bxx, 35Dxx, 35R30, 35R35, 58J35]

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35K05 Heat equation

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35K10 General theory of second-order, parabolic equations

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35L45 Initial value problems for hyperbolic systems of first-order PDE

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35L50 Boundary value problems for hyperbolic systems of first-order PDE

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Holcman, David *see* **Greiner, Peter C. et al., 2003i:35204**
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— A multidimensional version of the first Darboux problem for a second order degenerating hyperbolic equation. (English and Georgian summaries) **2003e:35121**
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Volkodavov, V. F. (*with* Ilyushina, Yu. A.) Characterization of the local extremum principle for an equation of hyperbolic type and its application. (Russian)

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Bae, Jeong Ja *see* **Park, Jong Yeoul, 2003i:35200**
Bastos, Waldemar D. *see* **Ferreira, Jorge, 2003d:74037**
Crasta, Graziano (*with* LeFloch, Philippe G.) Existence result for a class of nonconservative and nonstrictly hyperbolic systems. (English summary) **2003j:35201**
Doronin, Gleb G. (*with* Lar'kin, Nikolai A.) Global solvability for the quasilinear damped wave equation with nonlinear second-order boundary conditions. **2003d:35180**
Dreher, Michael Weakly hyperbolic equations, Sobolev spaces of variable order, and propagation of singularities. **2003f:35202**
Ferreira, Jorge (*with* Bastos, Waldemar D.) Global solvability of a mixed problem for an equation of nonlinear vibration. (English summary) **2003d:74037**

Galstyan, A. A. (*with* Reissig, Michael) L_p-L_q decay estimates for a Klein-Gordon type model equation. (English summary) **2003k:35143**
Ishida, Haruhisa (*with* Yagdzhyan, K. A.) On a sharp Levi condition in Gevrey classes for some infinitely degenerate hyperbolic equations and its necessity. **2003e:35174**
Kiguradze, Tariel On initial-boundary value problems for degenerate linear hyperbolic systems.
Klebanskaya, M. On singular nonlinear Goursat problem.
Lar'kin, Nikolai A. *see* **Doronin, Gleb G., 2003d:35180**
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Reissig, Michael *see* **Galstyan, A. A., 2003k:35143**
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Semerdzhieva, Rositsa I. A boundary value problem for nonlinear hyperbolic equations with order degeneration. (English summary) **2003j:35220**
— Existence and uniqueness of strong solutions for a class of quasi-linear hyperbolic equations with order degeneration. (English summary) **2003e:35204**
Spagnolo, Sergio *see* **Nishitani, Tatsuo, 2003b:35124**
Vlad, Marcel Ovidiu (*with* Ross, John[1]) Systematic derivation of reaction-diffusion equations with distributed delays and relations to fractional reaction-diffusion equations and hyperbolic transport equations: application to the theory of Neolithic transition. (English summary) **2003m:35133**
Wen, Guo Chun Boundary value problems for degenerate hyperbolic systems of first order equations. (English summary) **2003f:35188**
Yagdzhyan, K. A. *see* **Ishida, Haruhisa, 2003e:35174**
Yamazaki, Mitsuru *see* **Asakura, Fumioki, (2003b:76004)**

35L82 Pseudohyperbolic equations

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Kostomarov, D. P. The Cauchy problem for an ultrahyperbolic equation. (Russian) **2003i:35205**
— Solution of the Cauchy problem for an ultrahyperbolic equation by the averaging method. (Russian)
— Solution of the Cauchy problem for an ultrahyperbolic equation of dimension 3×2. (Russian) **2003g:35157**
Lekrine, Nadia *see* **Mesloub, Said, 2003h:35177**
Mesloub, Said (*with* Lekrine, Nadia) On a nonlocal singular mixed evolution problem. (English summary) **2003h:35177**
Tong, Deng Ke *see* **Tong, Xiao Jun et al., 2003i:35206**
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Trione, Susana Elena On the solutions of the causal and anticausal n-dimensional diamond operator. (English summary) **2003f:35218**

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Bouziani, Abdelfatah Initial-boundary value problem with a nonlocal condition for a viscosity equation. (English summary) **2003g:35135**
Ĭshchuk, Valentin V. *see* **Kushlik, Ol'ga Ĭ.**
Kananthai, A. (*with* Suantai, Suthep; Longani, V.) On the operator $\bigoplus^k$ related to the wave equation and Laplacian. (English summary) **2003f:35005**
— *see also* **Sritanratana, G., 2003i:35202**
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Suantai, Suthep *see* **Kananthai, A. et al., 2003f:35005**

35L85 Unilateral problems; variational inequalities for hyperbolic PDE [see also 35R35, 49J40]

Aassila, Mohammed On a variational inequality for a degenerate quasilinear hyperbolic equation. (English summary) **2003m:35178**
Bae, Jeong Ja *see* **Park, Jong Yeoul, 2003d:35192**
Park, Jong Yeoul (*with* Bae, Jeong Ja) Variational inequality for quasilinear wave equations with nonlinear damping terms. **2003d:35192**
Petrov, Adrien (*with* Schatzman, Michelle) Viscoélastodynamique monodimensionnelle avec conditions de Signorini. (English and French summaries) [One-dimensional viscoelastodynamics with Signorini boundary conditions] **2003e:35214**
Rodrigues, José-Francisco On the hyperbolic obstacle problem of first order. (English summary) **2003j:35226**
Schatzman, Michelle *see* **Petrov, Adrien, 2003e:35214**

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Gasiński, Leszek Existence result for hyperbolic hemivariational inequalities. (English summary)
— (*with* Smołka, Maciej) Existence of solutions for wave-type hemivariational inequalities with noncoercive viscosity damping. (English summary) **2003f:34111**
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Ionescu, Ioan R. Viscosity solutions for dynamic problems with slip-rate dependent friction. (English summary) **2003d:35253**
Kuttler, Kenneth L. (*with* Shillor, Meir) Vibrations of a beam between two stops. (English summary) **2003a:74023**
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Prado, Raúl (*with* Zuazua, Enrique) Asymptotic expansion for the generalized Benjamin-Bona-Mahony-Burger equation. (English summary) [Asymptotic expansion for the generalized Benjamin-Bona-Mahony-Burgers equation] **2003k:35218**
Shillor, Meir *see* **Kuttler, Kenneth L., 2003a:74023**
Smołka, Maciej *see* **Gasiński, Leszek, 2003d:49015** *and* **2003f:34111**
Zuazua, Enrique *see* **Prado, Raúl, 2003k:35218**

35L90 Abstract hyperbolic evolution equations

van der Merwe, Abraham Johannes *see* **van Rensburg, N. F. J., 2003j:35227**
van Rensburg, N. F. J. (*with* van der Merwe, Abraham Johannes) Analysis of the solvability of linear vibration models. (English summary) **2003j:35227**

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— On energy decay rate for linear damped systems. (English summary) **2003h:93060**
Ghisi, Marina (*with* Gobbino, Massimo) Stability of simple modes of the Kirchhoff equation. (English summary) **2003a:35132**
Gobbino, Massimo *see* **Ghisi, Marina, 2003a:35132**
Guo, Bao Zhu (*with* Luo, Yue-Hu) Riesz basis property of a second-order hyperbolic system with collocated scalar input-output. (English summary) **2003b:93047**
Jung, Il Hyo *see* **Park, Jong Yeoul et al., 2003i:34144**
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Park, Jong Yeoul (*with* Jung, Il Hyo; Kang, Yong Han) Generalized quasilinear hyperbolic equations and Yosida approximations. (English summary) **2003i:34144**
Payne, L. E. (*with* Schaefer, Philip W.) Energy bounds for some nonstandard problems in partial differential equations. (English summary) **2003g:34120**
Periago, F. (*with* Straub, B.) On the existence and uniqueness of solutions for an incomplete second-order abstract Cauchy problem. (English summary) **2003m:34137**
Pintér, Gabriella A. Global attractor for damped abstract nonlinear hyperbolic systems. (English summary) **2003k:37135**
Schaefer, Philip W. *see* **Payne, L. E., 2003g:34120**
Sinestrari, Eugenio Abstract hyperbolic equations in non-reflexive spaces. **2003m:34138**
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Triggiani, Roberto Optimal estimates of norms of fast controls in exact null controllability of two non-classical abstract parabolic systems. (English summary) **2003k:93014**
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Yagdzhyan, K. A. The Lax-Mizohata theorem for nonlinear gauze invariant equations. (English summary) [The Lax-Mizohata theorem for nonlinear gauge invariant equations] **2003k:35033**
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35L99 None of the above, but in this section

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Reich, Simeon (*with* Zaslavski, Alexander J.) A weak ergodic theorem for infinite products of Lipschitzian mappings. (English summary) **2003m:47100**
Zaslavski, Alexander J. *see* **Reich, Simeon, 2003m:47100**

35Mxx Partial differential equations of special type (mixed, composite, etc.) {For degenerate types, see 35J70, 35K65, 35L80.}

35M10 PDE of mixed type

Abdinazarov, S. (*with* Kurbonov, O. T.) On a problem for an equation of mixed type of high odd order with multiple characteristics. (Russian. English and Uzbek summaries)
Akbarova, S. Kh. *see* **Islomov, B., 2003j:35231**
Akimov, A. A. *see* **Sabitov, K. B., 2003b:35153**
Barros-Neto, J. (*with* Gel'fand, Izrail' Moiseevich) Fundamental solutions for the Tricomi operator. II. (English summary) **2003f:35219**
Bastos, Waldemar D. *see* **Ferreira, Jorge, 2003j:35230**
Bucci, Francesca (*with* Lasiecka, Irena; Triggiani, Roberto) Singular estimates and uniform stability of coupled systems of hyperbolic/parabolic PDEs. **2003j:35228**
Cao, Li-Qun (*with* Zhu, De-Chao; Luo, Jian-Lan) Multiscale asymptotic expansion for a class of hyperbolic-parabolic type equation with highly oscillatory coefficients. (English summary) **2003h:35178**
Cavalcanti, Marcelo M. (*with* Domingos Cavalcanti, Valéria N.; Prates Filho, J. S.; Soriano, Juan A.) Existence and uniform decay of solutions of a parabolic-hyperbolic equation with nonlinear boundary damping and boundary source term. (English summary) **2003e:35215**

Chueshev, A. V. On a higher-order linear equation of mixed type. (Russian. Russian summary) **2003e:35216**
Domingos Cavalcanti, Valéria N. *see* **Cavalcanti, Marcelo M. et al., 2003e:35215**
Dzhuraev, T. D. (*with* Khashimov, A. R.) On third-order equations of composite type in domains with a nonsmooth boundary. (Russian. English and Uzbek summaries)
Èshmatov, B. È. On the Volterra property for a problem with Bitsadze-Samarskiĭ conditions for a parabolic-hyperbolic equation. (Russian. English and Uzbek summaries) **2003j:35229**
Èshonkulov, B. O. The Gellerstedt problem with data on the characteristics of a family and with nonlocal conjugation conditions. (Russian. English and Uzbek summaries)
— *see also* **Mirsaburov, M.**
Ferreira, Jorge (*with* Bastos, Waldemar D.) Decay of solutions of a mixed problem for a nonlinear hyperbolic-parabolic equation in noncylindrical domains. (English summary) **2003j:35230**
Gel′fand, Izrail′ Moiseevich *see* **Barros-Neto, J., 2003f:35219**
Idrisov, R. G. *see* **Sabitov, K. B.**
Islomov, B. (*with* Kurbonov, O. T.) On a nonlocal boundary value problem for an equation of mixed type with two interior lines of degeneracy in an unbounded domain. (Russian. English and Uzbek summaries)
— (*with* Akbarova, S. Kh.) Boundary value problems for an equation of mixed elliptic-parabolic type with two lines and different orders of degeneration. (Russian. English and Uzbek summaries) **2003j:35231**
Kazimov, T. G. On solution of one boundary value problem for Lavrentyev-Bitsadze equation. (English and Azerbaijani summaries)
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Khashimov, A. R. *see* **Dzhuraev, T. D.**
Klebanskaya, M. On singular nonlinear Goursat problem.
Kuchkarova, A. N. *see* **Sabitov, K. B., 2003b:35154**
Kurbonov, O. T. *see* **Abdinazarov, S.** *and* **Islomov, B.**
Kur′yazov, D. M. *see* **Salakhitdinov, M. S., 2003j:35233**
Lasiecka, Irena *see* **Bucci, Francesca et al., 2003j:35228**
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Lupo, Daniela (*with* Payne, Kevin R.) Multiplicity of nontrivial solutions for an asymptotically linear nonlocal Tricomi problem. **2003a:35136**
— (*with* Payne, Kevin R.) Spectral bounds for Tricomi problems and application to semilinear existence and existence with uniqueness results. (English summary) **2003g:35158**
Ma, Zhong Tai *see* **Wen, Guo Chun, 2003k:35175**
Mamazhonov, M. (*with* Turgunov, A.) On a class of boundary value problems for a fourth-order equation of parabolic-hyperbolic type in a rectangular domain. (Russian. English and Uzbek summaries)
Mascia, Corrado (*with* Porretta, Alessio; Terracina, Andrea) Nonhomogeneous Dirichlet problems for degenerate parabolic-hyperbolic equations. (English summary) **2003e:35217**
Matheshvili, D. On characteristic problems for an second order nonlinear mixed type equation.
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— A boundary value problem for a class of equations of mixed type with the Bitsadze-Samarskiĭ condition on parallel characteristics. (Russian. Russian summary) **2003g:35159**
— (*with* Èshonkulov, B. O.) On a generalization of the Darboux problem. (Russian. English and Uzbek summaries)
Moiseev, E. I. (*with* Zarubin, A. N.) The Tricomi problem for the Lavrent′ev-Bitsadze equation with retarded argument. (Russian. Russian summary) **2003j:35232**
Mugafarov, M. F. *see* **Sabitov, K. B., 2003m:35179**
Payne, Kevin R. *see* **Lupo, Daniela, 2003a:35136** *and* **2003g:35158**
Porretta, Alessio *see* **Mascia, Corrado et al., 2003e:35217**
Prates Filho, J. S. *see* **Cavalcanti, Marcelo M. et al., 2003e:35215**
Rassias, John Michael Uniqueness of quasi-regular solutions for a bi-parabolic elliptic bi-hyperbolic Tricomi problem. (English summary) **2003e:35218**
Sabitov, K. B. (*with* Akimov, A. A.) On the theory of an analogue of the Neumann problem for equations of mixed type. (Russian) **2003b:35153**
— (*with* Idrisov, R. G.) The Gellerstedt problem for systems of equations of mixed type. (Russian)
— (*with* Kuchkarova, A. N.) Spectral properties of the solution of the Gellerstedt problem for equations of mixed type and their applications. (Russian. Russian summary) **2003b:35154**
— (*with* Mugafarov, M. F.) On the existence of a solution of the Tricomi problem for a class of systems of equations of mixed type. (Russian. Russian summary) **2003m:35179**
Salakhitdinov, M. S. (*with* Kur′yazov, D. M.) On some boundary value problems for a third-order loaded equation. (Russian. English and Uzbek summaries) **2003j:35233**
Salmanova, Sh. Yu. The a priori estimate of Hölder's norm of solutions of degenerate elliptico-parabolic equations of the second order. (English and Azerbaijani summaries)
Sokhadze, R. Neumann problem for an mixed type equation with weighted conditions on the degeneracy curve.
Soriano, Juan A. *see* **Cavalcanti, Marcelo M. et al., 2003e:35215**
Terracina, Andrea *see* **Mascia, Corrado et al., 2003e:35217**
Triggiani, Roberto *see* **Bucci, Francesca et al., 2003j:35228**
Turgunov, A. *see* **Mamazhonov, M.**
Wen, Guo Chun Oblique derivative problems for second order equations of mixed type in multiply connected domains. (English summary) **2003k:35174**
— The Frankl problem for second-order quasilinear equations of mixed type. (Chinese. English and Chinese summaries) **2003c:35122**
— (*with* Ma, Zhong Tai) Discontinuous oblique derivative problem for second order equations of mixed type in general domains. (English summary) **2003k:35175**
Zarubin, A. N. *see* **Moiseev, E. I., 2003j:35232**
Zhu, De-Chao *see* **Cao, Li-Qun et al., 2003h:35178**
Zunnunov, R. T. The Tricomi problem for an equation of mixed type in an unbounded domain. (Russian. English and Uzbek summaries) **2003j:35234**

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Čiegis, Raimondas (*with* Papastavrou, Areti; Zemitis, Aivars) Additive splitting methods for elliptic-parabolic problems. (English and Italian summaries) **2003b:65082**
Dzhuraev, T. D. (*with* Sopuev, A.) ★ К теории дифференциальных уравнений в частных производных четвертого порядка. (Russian. Russian summary) [On the theory of fourth-order partial differential equations] **2003h:35003**
Imanbaeva, A. B. *see* **Muratbekov, M. B., 2003e:47084**
Kadirov, F. È. *see* **Takhirov, Zh. O., 2003j:35336**
Kallel-Jallouli, Saoussen Existence of C^∞ local solutions of the complex Monge-Ampère equation. (English summary) **2003j:35094**
Kuzikov, S. S. Optimization of the solution of a boundary value problem for a symmetric system by means of boundary conditions. (Russian) **2003d:49035**
Kuz′min, A. G. Solvability of a problem for transonic flow with a local supersonic region. (English summary) **2003e:76069**
LeFloch, Philippe G. (*with* Mercier, Jean-Marc; Rohde, Christian) Fully discrete, entropy conservative schemes of arbitrary order. (English summary) **2003k:65088**
Litvinchuk, Georgii S. ★ Solvability theory of boundary value problems and singular integral equations with shift. (English summary) **2003c:47086**
Lupo, Daniela (*with* Payne, Kevin R.) Critical exponents for semilinear equations of mixed elliptic-hyperbolic and degenerate types. (English summary) **2003i:35023**
Mercier, Jean-Marc (*with* Piccoli, Benedetto) Admissible Riemann solvers for genuinely nonlinear p-systems of mixed type. (English summary) **2003g:35139**
— *see also* **LeFloch, Philippe G. et al., 2003k:65088**
Moiseev, E. I. On the solvability of a nonlocal boundary value problem. (Russian. Russian summary) **2003g:35099**
Muratbekov, M. B. (*with* Imanbaeva, A. B.) On the existence of the resolvent of an operator of mixed type in $L_2(\mathbf{R}^2)$ and its properties. (Russian. English, Russian and Kazakh summaries) **2003e:47084**
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Otway, Thomas H. Hodge equations with change of type. (English summary) **2003i:30077**
Papastavrou, Areti *see* **Čiegis, Raimondas et al., 2003b:65082**
Payne, Kevin R. *see* **Lupo, Daniela, 2003i:35023**
Piccoli, Benedetto *see* **Mercier, Jean-Marc, 2003g:35139**
Rohde, Christian *see* **LeFloch, Philippe G. et al., 2003k:65088**
Sopuev, A. *see* **Dzhuraev, T. D., 2003h:35003**
Takhirov, Zh. O. (*with* Kadirov, F. È.) A Stefan-type problem for a parabolic-hyperbolic (quasilinear) equation with nonlinear conditions. (Russian. English and Uzbek summaries) **2003j:35336**
Yamazaki, Noriaki *see* **Okazaki, Takanobu, 2003h:76123**
Zemitis, Aivars *see* **Čiegis, Raimondas et al., 2003b:65082**
Zuo, Da Feng (*with* Chen, Qing[2]; Cheng, Yi[1]) Surfaces and their integrability in 3-dimensional Minkowski space. (Chinese. English and Chinese summaries) **2003h:53010**

35M20 PDE of composite type

Al′shin, A. B. Initial-boundary value problems for an equation of composite type with moving boundaries. (Russian. Russian summary) **2003c:35123**
Bougoffa, Lazhar (*with* Moulay, Mohamed Said) Generalized solutions to parabolic-hyperbolic equations. (English summary) **2003m:35180**
Dryja, Maksymilian (*with* Moszyński, Krzysztof) On Jeffreys model of heat conduction. (English summary) **2003b:35155**
Kadyrov, R. R. *see* **Khashimov, A. R.**
Khashimov, A. R. (*with* Kadyrov, R. R.) On classes of uniqueness of the solution of a third-order equation of composite type in unbounded domains. (Russian. English and Uzbek summaries)
— An analogue of the Saint-Venant principle, and the uniqueness of the solution of the first boundary value problem in unbounded domains for a third-order equation of composite type. (Russian. English and Uzbek summaries) **2003j:35235**
Korpusov, M. O. (*with* Pletner, Yu. D.; Sveshnikov, A. G.) On the existence of a regime of steady oscillations in the Cauchy problem for an equation of composite type. (Russian. Russian summary) **2003b:35156**
Korzyuk, V. I. (*with* Lemeshevskiĭ, S. V.) Problems on conjugation of polytypic equations. (English and Lithuanian summaries) **2003e:35219**
Lemeshevskiĭ, S. V. *see* **Korzyuk, V. I., 2003e:35219**
Leung, Anthony W. Asymptotically stable invariant manifold for coupled nonlinear parabolic-hyperbolic partial differential equations. (English summary) **2003k:35176**
Moszyński, Krzysztof *see* **Dryja, Maksymilian, 2003b:35155**
Moulay, Mohamed Said *see* **Bougoffa, Lazhar, 2003m:35180**
Pletner, Yu. D. *see* **Korpusov, M. O. et al., 2003b:35156**
Safarov, D. Kh. A kind of Riemann-Hilbert problem for non-classical systems of partial differential equations. (English summary) **2003k:35177**
Sveshnikov, A. G. *see* **Korpusov, M. O. et al., 2003b:35156**

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Cimatti, Giovanni Forced oscillations in piezoelectric crystals. (English summary) **2003j:74016**
Dzhuraev, T. D. (*with* Sopuev, A.) ★ К теории дифференциальных уравнений в частных производных четвертого порядка. (Russian. Russian summary) [On the theory of fourth-order partial differential equations] **2003h:35003**
Iguchi, Tatsuo (*with* Kawashima, Shuichi) On space-time decay properties of solutions to hyperbolic-elliptic coupled systems. (English summary) **2003e:35029**

Kawashima, Shuichi (*with* Nishibata, Shinya) A singular limit for hyperbolic-elliptic coupled systems in radiation hydrodynamics. (English summary) **2003e:35018**
— *see also* **Iguchi, Tatsuo**, **2003e:35029**
Kur′yazov, D. M. *see* **Salakhitdinov, M. S.**, **2003j:35233**
Nishibata, Shinya *see* **Kawashima, Shuichi**, **2003e:35018**
Pak, Hee Chul *see* **Showalter, R. E.**, **2003b:35021**
Salakhitdinov, M. S. (*with* Kur′yazov, D. M.) On some boundary value problems for a third-order loaded equation. (Russian. English and Uzbek summaries) **2003j:35233**
Showalter, R. E. (*with* Pak, Hee Chul) Thin-film capacitance models. (English summary) **2003b:35021**
Sopuev, A. *see* **Dzhuraev, T. D.**, **2003h:35003**
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35Nxx Overdetermined systems [see also 58Hxx, 58J10, 58J15]

35N05 Overdetermined systems with constant coefficients

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35Qxx Equations of mathematical physics and other areas of application [see also 35J05, 35J10, 35K05, 35L05]

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35Q99 None of the above, but in this section

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35Rxx Miscellaneous topics involving partial differential equations {For equations on manifolds, see 58Jxx; for manifolds of solutions, see 58Bxx; for stochastic PDEs, see also 60H15.}

35R05 PDE with discontinuous coefficients or data

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35R10 Partial functional-differential or differential-difference equations, with or without deviating arguments

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35R25 Improperly posed problems for PDE

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35S99 None of the above, but in this section

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Items with secondary classifications in 35S99

Agranovich, M. S. (*with* Amosov, B. A.; Levitin, M. R.) Spectral problems for the Lamé system with spectral parameter in boundary conditions on smooth or nonsmooth boundary. (English summary) **2003b:74009**
Amosov, B. A. *see* **Agranovich, M. S. et al., 2003b:74009**
Levitin, M. R. *see* **Agranovich, M. S. et al., 2003b:74009**

37–XX Dynamical systems and ergodic theory [see also 26A18, 28Dxx, 34Cxx, 34Dxx, 35Bxx, 46Lxx, 58Jxx, 70–XX]

37–01 Instructional exposition (textbooks, tutorial papers, etc.)

Brin, Michael (*with* Stuck, Garrett) ★ Introduction to dynamical systems. **2003m:37001**
Kulenović, Mustafa R. S. (*with* Merino, Orlando) ★ Discrete dynamical systems and difference equations with *Mathematica*. (English summary) **2003j:37001**
Lines, Marji *see* **Medio, Alfredo, 2003e:37001**
Medio, Alfredo (*with* Lines, Marji) ★ Nonlinear dynamics. (English summary) **2003e:37001**
Merino, Orlando *see* **Kulenović, Mustafa R. S., 2003j:37001**
Stuck, Garrett *see* **Brin, Michael, 2003m:37001**

Items with secondary classifications in 37–01

(Bates, Peter W.) *see* **Hartman, Philip, 2003h:34001**
Hartman, Philip ★ Ordinary differential equations. (English summary) **2003h:34001**

37–02 Research exposition (monographs, survey articles)

Afraimovich, Valentin (*with* Hsu, Sze-Bi) ★ Lectures on chaotic dynamical systems. **2003k:37001**
Alpern, Steve (*with* Prasad, Vidhu S.) Properties generic for Lebesgue space automorphisms are generic for measure-preserving manifold homeomorphisms. (English summary) **2003m:37002**
Bonatti, Christian C^1-generic dynamics: tame and wild behaviour. (English summary) **2003k:37002**
Camacho, César Open problems in complex dynamics. (Spanish)
Chepyzhov, Vladimir V. (*with* Vishik, Mark I.) ★ Attractors for equations of mathematical physics. (English summary) **2003f:37001c**
Chua, Leon O. *see* **Shil′nikov, Leonid P. et al., 2003d:37002**
Gray, Lawrence A mathematician looks at S. Wolfram's new kind of science. Review of: *A new kind of science* [Wolfram Media, Inc., Champaign, IL, 2002; 1920418].
Grüne, Lars ★ Asymptotic behavior of dynamical and control systems under perturbation and discretization. **2003d:37001**
Guckenheimer, John Numerical analysis of dynamical systems. **2003i:37001**
Hsu, Sze-Bi *see* **Afraimovich, Valentin, 2003k:37001**
Marmi, Stefano (*with* Yoccoz, Jean-Christophe) Some open problems related to small divisors. **2003g:37001**
Masur, Howard (*with* Tabachnikov, Sergei) Rational billiards and flat structures. **2003j:37002**
(Mees, Alistair I.) *see* **Nonlinear dynamics and statistics, 2003f:37002**
Prasad, Vidhu S. *see* **Alpern, Steve, 2003m:37002**
Robinson, James Cooper ★ Infinite-dimensional dynamical systems. (English summary) **2003f:37001a**
Sell, George R. (*with* You, Yuncheng) ★ Dynamics of evolutionary equations. (English summary) **2003f:37001b**
Shil′nikov, A. L. *see* **Shil′nikov, Leonid P. et al., 2003d:37002**
Shil′nikov, Leonid P. (*with* Shil′nikov, A. L.; Turaev, D. V.; Chua, Leon O.) ★ Methods of qualitative theory in nonlinear dynamics. Part II. (English summary) **2003d:37002**
Tabachnikov, Sergei *see* **Masur, Howard, 2003j:37002**
Turaev, D. V. *see* **Shil′nikov, Leonid P. et al., 2003d:37002**
Vishik, Mark I. *see* **Chepyzhov, Vladimir V., 2003f:37001c**
Wolfram, Stephen ★ A new kind of science. (English summary) **2003i:37002**
— *see also* **Gray, Lawrence**
Yoccoz, Jean-Christophe *see* **Marmi, Stefano, 2003g:37001**
You, Yuncheng *see* **Sell, George R., 2003f:37001b**

Items listed otherwise than by author

Cambridge ★ Nonlinear dynamics and statistics. **2003f:37002**
Lecture Notes in Mathematics *see* **Grüne, Lars, 2003d:37001**
Nonlinear dynamics and statistics ★ Nonlinear dynamics and statistics. **2003f:37002**

Items with secondary classifications in 37–02

Benedicks, Michael Non uniformly hyperbolic dynamics: Hénon maps and related dynamical systems. (English summary) **2003m:37034**
(Fiedler, Bernold) *see* **Handbook: Dynamical systems, 2003f:37004**
Long, Yi Ming ★ Index theory for symplectic paths with applications. (English summary) **2003d:37091**
Ruelle, David P. Some ill-formulated problems on regular and messy behavior in statistical mechanics and smooth dynamics for which I would like the advice of Yasha Sinai.
— *see also* **Sinaĭ, Yakov Grigor′evich**
Sinaĭ, Yakov Grigor′evich What, in my opinion, David Ruelle should do in the coming years?
— *see also* **Ruelle, David P.**

Items listed otherwise than by author

Handbook:
Dynamical systems ★ Handbook of dynamical systems. Vol. 2. **2003f:37004**
Progress in Mathematics *see* **Long, Yi Ming, 2003d:37091**

37–03 Historical (must also be assigned at least one classification number from Section 01)

(Abraham, Ralph H.) *see* **Chaos avant-garde, 2003e:37002**
Aubin, David (*with* Dahan Dalmedico, Amy) Writing the history of dynamical systems and chaos: longue durée and revolution, disciplines and cultures. (English and French summaries) **2003k:37003**
Dahan Dalmedico, Amy *see* **Aubin, David, 2003k:37003**
Hasselblatt, Boris (*with* Katok, Anatole) The development of dynamics in the 20th century and the contribution of Jürgen Moser. (English summary) **2003h:37001**
Katok, Anatole *see* **Hasselblatt, Boris, 2003h:37001**
(Moser, Jürgen) *see* **Hasselblatt, Boris, 2003h:37001**
(Ueda, Yoshisuke) *see* **Chaos avant-garde, 2003e:37002**

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Chaos avant-garde ★ The chaos avant-garde. **2003e:37002**

Items with secondary classifications in 37–03

Kaup, David J. The legacy of the IST. (English summary) **2003k:37118**
Lax, Peter D. Jürgen Moser, 1928–1999.
(Moser, Jürgen) *see* **Lax, Peter D.**
Pechenkin, A. A. The concept of self-oscillations and the rise of synergetics ideas in the theory of nonlinear oscillations. (English summary) **2003d:34001**

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Obituary:
Moser, Jürgen K. *see* **Lax, Peter D.**

37–04 Explicit machine computation and programs (not the theory of computation or programming)

Edneral, V. F. Bifurcation analysis of low resonant case of the generalized Hénon-Heiles system. (English summary) **2003k:37004**
Grebenikov, Evgeniĭ Aleksandrovich The methods of computer algebra and the Arnold-Moser theorem. (English summary) **2003k:37005**

Items with secondary classifications in 37–04

Chernykh, German A. *see* **Yamrom, Boris et al.**
Dang, Yumei (*with* Kauffman, Louis H.; Sandin, Daniel) ★ Hypercomplex iterations. (English summary) **2003f:37075**
Ermentrout, George Bard ★ Simulating, analyzing, and animating dynamical systems. (English summary) **2003i:37085**
Foursov, Mikhail V. (*with* Moreno Maza, Marc) On computer-assisted classification of coupled integrable equations. (English summary) **2003e:37093**
Geum, Young Hee (*with* Kim, Young Ik) A study on computation of component centers in the degree-n bifurcation set. (English summary) **2003m:37067**
Kauffman, Louis H. *see* **Dang, Yumei et al., 2003f:37075**
Kim, Young Ik *see* **Geum, Young Hee, 2003m:37067**
Kulenović, Mustafa R. S. (*with* Merino, Orlando) ★ Discrete dynamical systems and difference equations with *Mathematica*. (English summary) **2003j:37001**
Kunin, Isaak A. *see* **Yamrom, Boris et al.**
Merino, Orlando *see* **Kulenović, Mustafa R. S., 2003j:37001**
Moreno Maza, Marc *see* **Foursov, Mikhail V., 2003e:37093**
Sandin, Daniel *see* **Dang, Yumei et al., 2003f:37075**
Tucker, Warwick A rigorous ODE solver and Smale's 14th problem. (English summary) **2003b:37055**
Wolf, Thomas Otto A comparison of four approaches to the calculation of conservation laws. (English summary) **2003a:35129**
Yamrom, Boris (*with* Kunin, Isaak A.; Chernykh, German A.) Centroidal trajectories and frames for chaotic dynamical systems. (English summary)
Yu, Pei[1] (*with* Yuan, Yuan[2]) An efficient method for computing the simplest normal forms of vector fields. (English summary) **2003k:34080**
Yuan, Yuan[2] *see* **Yu, Pei**[1], **2003k:34080**

37–06 Proceedings, conferences, collections, etc.

(Anagnostopoulos, A. N.) *see* **Proceedings: Conference on Applied Nonlinear Dynamics: from Semiconductors to Information Technologies**
(Andronov, A. A.) *see* **Progress in nonlinear science, 2003j:37003**
(Antoniou, Ioannis E.) *see* **Proceedings: Conference on Applied Nonlinear Dynamics: from Semiconductors to Information Technologies**
(di Bernardo, Mario) *see* **Nonlinear dynamics and chaos: where do we go from here?, 2003f:37005**
(Blekhman, I. I.) *see* **Special Issue: Chaos synchronization and control**
(Bona, Jerry L.) *see* **Legacy of the inverse scattering transform in applied mathematics, 2003g:37002**
(Cenys, A.) *see* **Proceedings: Conference on Applied Nonlinear Dynamics: from Semiconductors to Information Technologies**
(Champneys, Alan R.) *see* **Nonlinear dynamics and chaos: where do we go from here?, 2003f:37005**
(Chen, Guan-rong) *see* **Chaos control and synchronization**
(Choudhury, S. Roy) *see* **Legacy of the inverse scattering transform in applied mathematics, 2003g:37002**
Eliasson, L. H. (*with* Kuksin, Sergei B.; Marmi, Stefano; Yoccoz, Jean-Christophe) ★ Dynamical systems and small divisors. **2003c:37001**
(Fiedler, Bernold) *see* **Handbook: Dynamical systems, 2003f:37004**
(Fradkov, A. L.) *see* **Special Issue: Chaos synchronization and control**
(Glendinning, P. A.) *see* **From finite to infinite dimensional dynamical systems, 2003f:37003**
(Hasselblatt, Boris) *see* **Handbook: Dynamical systems, 2003c:37002**
(Hogan, S. J.) *see* **Nonlinear dynamics and chaos: where do we go from here?, 2003f:37005**
(Homer, Martin) *see* **Nonlinear dynamics and chaos: where do we go from here?, 2003f:37005**
(Katok, Anatole) *see* **Handbook: Dynamical systems, 2003c:37002**
(Kaup, David J.) *see* **Legacy of the inverse scattering transform in applied mathematics, 2003g:37002**

(Kovalevskaya, Sof′ya Vasil′evna) *see* **Kowalevski property**, 2003c:37003
(Krauskopf, Bernd) *see* **Nonlinear dynamics and chaos: where do we go from here?**, 2003f:37005
Kuksin, Sergei B. *see* **Eliasson, L. H. et al.**, 2003c:37001
(Kuznetsov, Vadim B.) *see* **Kowalevski property**, 2003c:37003
(Lerman, Lev M.) *see* **Progress in nonlinear science**, 2003j:37003
(Maass, Alejandro) *see* **Dynamics and randomness**, 2003m:37003
Marmi, Stefano *see* **Eliasson, L. H. et al.**, 2003c:37001
(Martínez, Servet A.) *see* **Dynamics and randomness**, 2003m:37003
(Moeckilde, Erik) *see* **Special Issue: Chaos synchronization and control**
(Nicolis, G.) *see* **Spatio-temporal complexity**
(Osinga, Hinke) *see* **Nonlinear dynamics and chaos: where do we go from here?**, 2003f:37005
(Robinson, James Cooper) *see* **From finite to infinite dimensional dynamical systems**, 2003f:37003
(San Martin, Jaime) *see* **Dynamics and randomness**, 2003m:37003
(Shil′nikov, Leonid P.) *see* **Progress in nonlinear science**, 2003j:37003
(Velarde, Manuel G.) *see* **Spatio-temporal complexity**
(Wilson, Eddie) *see* **Nonlinear dynamics and chaos: where do we go from here?**, 2003f:37005
Yoccoz, Jean-Christophe *see* **Eliasson, L. H. et al.**, 2003c:37001

Items listed otherwise than by author

Anniversary:
Birth of Andronov, A. A. ★ Progress in nonlinear science. Vol. 1. **2003j:37003**
Birth of Kovalevskaya, Sof′ya Vasil′evna ★ The Kowalevski property. **2003c:37003**
Bilinear method in the study of integrable systems and related topics ★ Kasekibun kei kenkyū ni okeru sō senkeika hō to sonu shūhen. (Japanese) [Bilinear method in the study of integrable systems and related topics]
Bristol ★ Nonlinear dynamics and chaos: where do we go from here? **2003f:37005**
Cambridge ★ From finite to infinite dimensional dynamical systems. **2003f:37003**
Cetraro *see* **Eliasson, L. H. et al.**, **2003c:37001**
Chaos control and synchronization ★ Chaos control and synchronization.
Complex dynamics and related fields ★ Fukuso rikigakkei to sono kanren bunya no kenkyū. (Japanese) [Complex dynamics and related fields]
Complex systems and theory of dynamical systems ★ Rikigakkei riron to fukuzatsu kei no sūri. (Japanese) [Complex systems and theory of dynamical systems] **2003a:37001**
Conference:
Control of Oscillations and Chaos ★ Special issue: Chaos synchronization and control.
Legacy of Inverse Scattering Transform in Nonlinear Wave Propagation ★ The legacy of the inverse scattering transform in applied mathematics. **2003g:37002**
Contemporary Mathematics ★ The legacy of the inverse scattering transform in applied mathematics. **2003g:37002**
Dynamical systems and small divisors *see* **Eliasson, L. H. et al.**, **2003c:37001**
Dynamics and randomness ★ Dynamics and randomness. **2003m:37003**
Festschrift:
Velarde, Manuel G. ★ Spatio-temporal complexity.
From finite to infinite dimensional dynamical systems ★ From finite to infinite dimensional dynamical systems. **2003f:37003**
Handbook:
Dynamical systems ★ Handbook of dynamical systems. Vol. 1A. **2003c:37002**
— ★ Handbook of dynamical systems. Vol. 2. **2003f:37004**
Kowalevski property ★ The Kowalevski property. **2003c:37003**
Lecture Notes in Mathematics *see* **Eliasson, L. H. et al.**, **2003c:37001**
Leeds ★ The Kowalevski property. **2003c:37003**
Legacy of the inverse scattering transform in applied mathematics ★ The legacy of the inverse scattering transform in applied mathematics. **2003g:37002**
Nizhny Novgorod ★ Progress in nonlinear science. Vol. 1. **2003j:37003**
Nonlinear dynamics and chaos: where do we go from here? ★ Nonlinear dynamics and chaos: where do we go from here? **2003f:37005**
Proceedings:
Conference on Applied Nonlinear Dynamics: from Semiconductors to Information Technologies ★ Proceedings of the Conference "Applied Nonlinear Dynamics: from Semiconductors to Information Technologies".
Progress in nonlinear science ★ Progress in nonlinear science. Vol. 1. **2003j:37003**
Santiago ★ Dynamics and randomness. **2003m:37003**
Shanghai ★ Chaos control and synchronization.
South Hadley, MA ★ The legacy of the inverse scattering transform in applied mathematics. **2003g:37002**
Spatio-temporal complexity ★ Spatio-temporal complexity.
Special Issue:
Chaos synchronization and control ★ Special issue: Chaos synchronization and control.
St. Petersburg ★ Special issue: Chaos synchronization and control.
Theory and application of nearly integrable Hamiltonian systems ★ Kin kasekibun Hamiruton kei no sūri to ōyō. (Japanese) [Theory and application of nearly integrable Hamiltonian systems]
Thessaloniki ★ Proceedings of the Conference "Applied Nonlinear Dynamics: from Semiconductors to Information Technologies".
Workshop:
Mathematical Methods of Regular Dynamics ★ The Kowalevski property. **2003c:37003**

Items with secondary classifications in 37–06

(Boĭko, V. M.) *see* **Symmetry in nonlinear mathematical physics**, **2003b:00031**
(Burdík, Č.) *see* **Quantum groups and integrable systems**
(Burger, Marc) *see* **Rigidity in dynamics and geometry**, **2003b:00029**
(Cherry, William A.) *see* **Value distribution theory and complex dynamics**, **2003g:30001**
(Delorme, Marianne) *see* **Cellular automata**, **2003h:68002**
(Guest, Martin A.) *see* **Integrable systems, topology, and physics**, **2003h:00016**
(Holmes, Philip J.) *see* **Geometry, mechanics, and dynamics**, **2003c:00027**
(Iozzi, Alessandra) *see* **Rigidity in dynamics and geometry**, **2003b:00029**
(Jamiołkowski, Andrzej) *see* **Symposium: Mathematical Physics**
(Kaplan, Ehud) *see* **Perspectives and problems in nonlinear science**, **2003k:00014**
(Lebowitz, Joel L.) *see* **Dedicated to David Ruelle and Yasha Sinai on the occasion of their 65th birthdays**
(Marsden, Jerrold E.) *see* **Geometry, mechanics, and dynamics**, **2003c:00027** *and* **Perspectives and problems in nonlinear science**, **2003k:00014**
(Mazoyer, Jacques) *see* **Cellular automata**, **2003h:68002**
(Michalski, Miłosz) *see* **Symposium: Mathematical Physics**
(Miyaoka, Reiko) *see* **Integrable systems, topology, and physics**, **2003h:00016**
(Mrugała, Ryszard) *see* **Symposium: Mathematical Physics**
(Newton, P. K.) *see* **Geometry, mechanics, and dynamics**, **2003c:00027**
(Nikitin, Anatoliĭ) *see* **Symmetry in nonlinear mathematical physics**, **2003b:00031**
(Ohnita, Yoshihiro) *see* **Integrable systems, topology, and physics**, **2003h:00016**
(Ostrogradskiĭ, Mikhail Vasil′evich) *see* **Symmetry in nonlinear mathematical physics**, **2003b:00031**
(Popovych, Roman O.) *see* **Symmetry in nonlinear mathematical physics**, **2003b:00031**
(Ruan, Shi Gui) *see* **Dynamical systems and their applications in biology**, **2003k:00011**
(Ruelle, David P.) *see* **Dedicated to David Ruelle and Yasha Sinai on the occasion of their 65th birthdays**
(Sinaĭ, Yakov Grigor′evich) *see* **Dedicated to David Ruelle and Yasha Sinai on the occasion of their 65th birthdays**
(Sirovich, Lawrence) *see* **Perspectives and problems in nonlinear science**, **2003k:00014**
(Sreenivasan, Katepalli R.) *see* **Perspectives and problems in nonlinear science**, **2003k:00014**
(Weinstein, Alan) *see* **Geometry, mechanics, and dynamics**, **2003c:00027**
(Wolkowicz, Gail S. K.) *see* **Dynamical systems and their applications in biology**, **2003k:00011**
(Wu, Jian Hong) *see* **Dynamical systems and their applications in biology**, **2003k:00011**
(Yang, Chung-Chun) *see* **Value distribution theory and complex dynamics**, **2003g:30001**

Items listed otherwise than by author

Anniversary:
Birth of Ostrogradskiĭ, Mikhail Vasil′evich ★ Symmetry in nonlinear mathematical physics. Part 1, 2. **2003b:00031**
Cambridge ★ Rigidity in dynamics and geometry. **2003b:00029**
Cape Breton Island, NS ★ Dynamical systems and their applications in biology. **2003k:00011**
Cellular automata ★ Cellular automata. **2003h:68002**
Colloquium:
Quantum Groups ★ Quantum groups and integrable systems.
Conference:
Integrable Systems in Differential Geometry ★ Integrable systems, topology, and physics. **2003h:00016**
Congress:
Mathematical ★ Symmetry in nonlinear mathematical physics. Part 1, 2. **2003b:00031**
Contemporary Mathematics ★ Value distribution theory and complex dynamics. **2003g:30001**
— ★ Integrable systems, topology, and physics. **2003h:00016**
Dedicated to David Ruelle and Yasha Sinai on the occasion of their 65th birthdays ★ Dedicated to David Ruelle and Yasha Sinai on the occasion of their 65th birthdays.
Dynamical systems and their applications in biology ★ Dynamical systems and their applications in biology. **2003k:00011**
Festschrift:
Marsden, Jerold Eldon ★ Geometry, mechanics, and dynamics. **2003c:00027**
Ruelle, David ★ Dedicated to David Ruelle and Yasha Sinai on the occasion of their 65th birthdays.
Sinaĭ, Yakov Grigor′evich ★ Dedicated to David Ruelle and Yasha Sinai on the occasion of their 65th birthdays.
Sirovich, Lawrence ★ Perspectives and problems in nonlinear science. **2003k:00014**
Geometry, mechanics, and dynamics ★ Geometry, mechanics, and dynamics. **2003c:00027**
Hong Kong ★ Value distribution theory and complex dynamics. **2003g:30001**
Integrable systems, topology, and physics ★ Integrable systems, topology, and physics. **2003h:00016**
Kyiv ★ Symmetry in nonlinear mathematical physics. Part 1, 2. **2003b:00031**
Perspectives and problems in nonlinear science ★ Perspectives and problems in nonlinear science. **2003k:00014**
Prague ★ Quantum groups and integrable systems.
Quantum groups and integrable systems ★ Quantum groups and integrable systems.
Rigidity in dynamics and geometry ★ Rigidity in dynamics and geometry. **2003b:00029**
Saissac ★ Cellular automata. **2003h:68002**
School:
Theoretical Computer Science ★ Cellular automata. **2003h:68002**
Symmetry in nonlinear mathematical physics ★ Symmetry in nonlinear mathematical physics. Part 1, 2. **2003b:00031**
Symposium:
Mathematical Physics ★ XXXIII Symposium on Mathematical Physics.
Tokyo ★ Integrable systems, topology, and physics. **2003h:00016**
Toruń ★ XXXIII Symposium on Mathematical Physics.
Value distribution theory and complex dynamics ★ Value distribution theory and complex dynamics. **2003g:30001**

37Axx Ergodic theory [see also 28Dxx]

Items with secondary classifications in 37Axx

Karlsson, Anders[2] Nonexpanding maps, Busemann functions, and multiplicative ergodic theory. (English summary) **2003b:37033**

37A05 Measure-preserving transformations

Artstein, Zvi (*with* Grinfeld, Michael) Ergodicity and mixing via Young measures. (English summary) **2003i:37003**

Bergelson, V. (*with* Leibman, A.) A nilpotent Roth theorem. (English summary) **2003a:37002**

Bose, Christopher (*with* Maume-Deschamps, Véronique; Schmitt, Bernard; Shin, Sujin) Invariant measures for piecewise convex transformations of an interval. (English summary) **2003c:37004**

Bousch, Thierry Un lemme de Mañé bilatéral. (English and French summaries) [A bilateral version of Mañé's lemma] **2003h:37002**

Choe, Geon Ho Recurrence of transformations with absolutely continuous invariant measures. (English summary) **2003c:37005**

Cobo, Milton Piece-wise affine maps conjugate to interval exchanges. (English summary) **2003h:37003**

Dajani, Karma A note on rotations and interval exchange transformations on 3-intervals. (English summary) **2003h:37004**

Ephremidze, Lasha On the uniqueness of the ergodic maximal function. (English summary) **2003c:37003**

Grinfeld, Michael *see* **Artstein, Zvi**, **2003i:37003**

Hoffman, Christopher (*with* Rudolph, Daniel J.) A dyadic endomorphism which is Bernoulli but not standard. (English summary) **2003j:37004**

— (*with* Rudolph, Daniel J.) If the $[T, \mathrm{Id}]$ automorphism is Bernoulli then the $[T, \mathrm{Id}]$ endomorphism is standard. (English summary) **2003k:37006**

Host, Bernard (*with* Kra, Bryna) An odd Furstenberg-Szemerédi theorem and quasi-affine systems. (English summary) **2003a:37003**

Jones, Roger L. (*with* Rosenblatt, Joseph Max) Differential and ergodic transforms. (English summary) **2003g:37003**

Keane, Michael S. (*with* Serafin, Jacek) Generators. (English summary) **2003f:37006**

Kifer, Yuri (*with* Weiss, Benjamin) Generating partitions for random transformations. (English summary) **2003k:37007**

Kochergin, A. V. A mixing special flow over a rotation of the circle with an almost Lipschitz function. (Russian. Russian summary) **2003f:37007**

Kra, Bryna *see* **Host, Bernard**, **2003a:37003**

Kwiatkowski, Jan (*with* Lacroix, Yves) Finite rank transformation and weak closure theorem. (English and French summaries) **2003b:37001**

Lacroix, Yves Possible limit laws for entrance times of an ergodic aperiodic dynamical system. (English summary) **2003k:37008**

— *see also* **Kwiatkowski, Jan**, **2003b:37001**

Leibman, A. Lower bounds for ergodic averages. (English summary) **2003h:37005**

— *see also* **Bergelson, V.**, **2003a:37002**

Lemańczyk, Mariusz (*with* Lesigne, Emmanuel) Ergodicity of Rokhlin cocycles. (English summary) **2003a:37004**

— (*with* Thouvenot, Jean-Paul; Weiss, Benjamin) Relative discrete spectrum and joinings. (English summary) **2003g:37004**

Lesigne, Emmanuel *see* **Lemańczyk, Mariusz**, **2003a:37004**

Maume-Deschamps, Véronique *see* **Bose, Christopher et al.**, **2003c:37004**

Mazzini, Gianluca *see* **Rovatti, Riccardo**, **2003a:37005** *and* **2003a:37006**

Mouat, Robert (*with* Tuncel, Selim) Constructing finitary isomorphisms with finite expected coding times. (English summary) **2003m:37004**

Noorani, Mohd. Salmi Md. Homogeneous extensions of shifts with Hölder continuous skewing functions. (English summary) **2003g:37005**

Pinto, A. A. (*with* Rand, D. A.) Existence, uniqueness and ratio decomposition for Gibbs states via duality. (English summary) **2003e:37004**

Rand, D. A. *see* **Pinto, A. A.**, **2003e:37004**

Rosenblatt, Joseph Max *see* **Jones, Roger L.**, **2003g:37003**

Rovatti, Riccardo (*with* Mazzini, Gianluca) Tensor function analysis of quantized chaotic piecewise-affine pseudo-Markov systems. I. Second-order correlations and self similarity. (English summary) **2003a:37005**

— (*with* Mazzini, Gianluca) Tensor function analysis of quantized chaotic piecewise-affine pseudo-Markov systems. II. Higher order correlations and self-similarity. (English summary) **2003a:37006**

Rudolph, Daniel J. *see* **Hoffman, Christopher**, **2003j:37004** *and* **2003k:37006**

de la Rue, Thierry (*with* de Sam Lazaro, José) Une transformation générique peut être insérée dans un flot. (English and French summaries) [A generic transformation can be embedded in a flow] **2003k:37009**

de Sam Lazaro, José *see* **de la Rue, Thierry**, **2003k:37009**

Saussol, Benoît (*with* Troubetzkoy, S.; Vaienti, S.) Recurrence, dimensions, and Lyapunov exponents. (English summary) **2003a:37007**

Schmitt, Bernard *see* **Bose, Christopher et al.**, **2003c:37004**

Serafin, Jacek *see* **Keane, Michael S.**, **2003f:37006**

Shin, Sujin *see* **Bose, Christopher et al.**, **2003c:37004**

Shkredov, I. D. Recurrence in the mean. (Russian. Russian summary) **2003k:37010**

Thouvenot, Jean-Paul *see* **Lemańczyk, Mariusz et al.**, **2003g:37004**

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37A25 Ergodicity, mixing, rates of mixing

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37A45 Relations with number theory and harmonic analysis [see also 11Kxx]

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37A50 Relations with probability theory and stochastic processes [see also 60Fxx and 60G10]

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Hill, Richard Michael (*with* Velani, Sanju L.) A zero-infinity law for well-approximable points in Julia sets. (English summary) **2003m:37065**
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37A55 Relations with the theory of C^*-algebras [See mainly 46L55]

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Størmer, Erling *see* **Neshveev, S. V.**, **2003d:46091**
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37A60 Dynamical systems in statistical mechanics [see also 82Cxx]

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Batista, Antônio M. (*with* Viana, Ricardo L.) Kolmogorov-Sinai entropy for locally coupled piecewise linear maps. (English summary) **2003f:37053**
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Burago, D. (*with* Ferleger, S.; Kononenko, Alexey Vladimir) Collisions in semi-dispersing billiard on Riemannian manifold. (English summary) **2003f:37061**
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37A99 None of the above, but in this section

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Livi, R. *see* **Ginelli, F. et al.**
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Steinsaltz, David Random logistic maps and Lyapunov exponents. (English summary) **2003d:37073**
Szarek, Tomasz *see* **Myjak, Józef, 2003e:28026** *and* **2003k:28014**
Terry, John R. *see* **Ashwin, Peter et al., 2003b:37014**
Urbański, Mariusz *see* **Heinemann, Stefan-M., 2003c:37029**; **Simon, Károly et al., 2003c:37030a** *and* **2003c:37030b**
Uspenskiĭ, V. A. Why Kolmogorov complexity? (English summary) **2003b:68086**
Vallée, Brigitte Dynamical sources in information theory: fundamental intervals and word prefixes. (English summary) **2003f:94026**
(Van Ness, J. W.) *see* **Mandelbrot, Benoit B., 2003a:01026**
(Wallis, J. R.) *see* **Mandelbrot, Benoit B., 2003a:01026**
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Gaussian self-affinity and fractals *see* **Mandelbrot, Benoit B., 2003a:01026**

37Bxx Topological dynamics [see also 54H20]

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Glasner, Eli Topics in topological dynamics, 1991 to 2001.

37B05 Transformations and group actions with special properties (minimality, distality, proximality, etc.)

Ashwin, Peter (*with* Fu, Xin-Chu; Terry, John R.) Riddling and invariance for discontinuous maps preserving Lebesgue measure. (English summary) **2003b:37014**
Auslander, Joseph (*with* Glasner, Eli) The distal order of a minimal flow. (English summary) **2003c:37012**
Beklaryan, L. A. About canonical types of the differential equations with deviating argument. **2003k:37019**
Bezuglyi, S. (*with* Kwiatkowski, Jan) Topologies on full groups and normalizers of Cantor minimal systems. (English summary) **2003j:37014**
Blanchard, François (*with* Glasner, Eli; Kolyada, S. F.; Maass, Alejandro) On Li-Yorke pairs. (English summary) **2003g:37014**
Bobok, Jozef Forcing relation on minimal interval patterns. (English summary) **2003b:37015**
Chen, Shu Juan (*with* Liu, Qiong) Study of Morse's conjecture on Σ^2. (Chinese. English and Chinese summaries)
Downarowicz, Tomasz (*with* Ye, Xiang Dong[1]) When every point is either transitive or periodic. (English summary) **2003g:37015**
Feĭziev, A. S. Complexity of trajectories of dynamical systems for actions of noncommutative groups. (Russian. English and Azerbaijani summaries) **2003d:37008**
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Glasner, Eli (*with* Weiss, Benjamin) Minimal actions of the group $\mathbb{S}(\mathbb{Z})$ of permutations of the integers. (English summary) **2003h:37009**
— *see also* **Auslander, Joseph, 2003c:37012** *and* **Blanchard, François et al., 2003g:37014**
He, Lianfa (*with* Gao, Yinghui; Yang, Fenghong) Some dynamical properties of continuous semi-flows having topological transitivity. (English summary) **2003e:37010**
— (*with* Zhou, Lina; Lu, Jinfeng) The dynamical properties of a continuous semiflow and its inverse limit. (English summary) **2003e:37011**
Huang, Wen (*with* Ye, Xiang Dong[1]) An explicit scattering, non-weakly mixing example and weak disjointness. (English summary) **2003b:37016**
— (*with* Ye, Xiang Dong[1]) Devaney's chaos or 2-scattering implies Li-Yorke's chaos. (English summary) **2003b:37017**
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Kolyada, S. F. *see* **Blanchard, François et al., 2003g:37014**
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Lemańczyk, Mariusz (*with* Mentzen, Mieczysław K.) Topological ergodicity of real cocycles over minimal rotations. (English summary) **2003a:37014**
Li, Ming-Chia Transitivity and a periodic point do not imply sensitivity. (English summary) **2003d:37009**
Liu, Qiong *see* **Chen, Shu Juan**
Lu, Jinfeng *see* **He, Lianfa et al., 2003e:37011**
Maass, Alejandro *see* **Blanchard, François et al., 2003g:37014**
Matui, Hiroki Topological orbit equivalence of locally compact Cantor minimal systems. (English summary) **2003k:37020**
— Dimension groups of topological joinings and non-coalescence of Cantor minimal systems. (English summary) **2003b:37018**
— Some remarks on topological orbit equivalence of Cantor minimal systems. (English summary) **2003k:37021**
Mentzen, Mieczysław K. *see* **Lemańczyk, Mariusz, 2003a:37014**
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Wang, Li Juan *see* **Song, Wei[1] et al., 2003m:37010**
Weiss, Benjamin *see* **Glasner, Eli, 2003h:37009**
Yang, Fenghong *see* **He, Lianfa et al., 2003e:37010**
Yang, Run Sheng Topologically ergodic maps. (Chinese. English and Chinese summaries) **2003c:37013**
Ye, Xiang Dong[1] *see* **Huang, Wen, 2003b:37016**; **2003b:37017** *and* **Downarowicz, Tomasz, 2003g:37015**
Yuasa, Hisatoshi Hopf-equivalences for zero-dimensional dynamical systems. (English summary) **2003j:37016**
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Zhang, Ai Hua *see* **Song, Wei[1] et al., 2003m:37010**
Zhou, Lina *see* **He, Lianfa et al., 2003e:37011**
Zhou, Lizhen *see* **Shi, Enhui et al., 2003j:37015**
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Jarczyk, Witold Reversible interval homeomorphisms. (English summary) **2003k:37054**
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Marzougui, Habib On Morse conjecture for flows on closed surfaces. (English summary) **2003d:37057**
— Area preserving flows with a dense orbit. (English summary) **2003g:37081**
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37B25 Lyapunov functions and stability; attractors, repellers

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37B30 Index theory, Morse-Conley indices

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37B55 Nonautonomous dynamical systems

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37C15 Topological and differentiable equivalence, conjugacy, invariants, moduli, classification

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37C20 Generic properties, structural stability

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37C25 Fixed points, periodic points, fixed-point index theory

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37C27 Periodic orbits of vector fields and flows

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37C29 Homoclinic and heteroclinic orbits

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37C30 Zeta functions, (Ruelle-Frobenius) transfer operators, and other functional analytic techniques in dynamical systems

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37C35 Orbit growth

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37C40 Smooth ergodic theory, invariant measures [see also 37Dxx]

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37C45 Dimension theory of dynamical systems

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37C50 Approximate trajectories (pseudotrajectories, shadowing, etc.)

Al-nayef, Anwar A. Bi-shadowing of infinite trajectories for difference equations in Banach spaces. (English summary) **2003g:37036**
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37C55 Periodic and quasiperiodic flows and diffeomorphisms

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37C60 Nonautonomous smooth dynamical systems [see also 37B55]

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Mierczyński, Janusz (*with* Schreiber, Sebastian J.) Kolmogorov vector fields with robustly permanent subsystems. (English summary) **2003b:37041**
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37C65 Monotone flows

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Wang, Zhi Cheng[1] *see* **Wang, Liang Long et al.**, **2003j:34152**
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37C70 Attractors and repellers, topological structure

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Aracena, Julio *see* **Demongeot, Jacques et al.**, **2003b:37040**
Cheban, David N. Global pullback attractors of $\mathbb{C}$-analytic nonautonomous dynamical systems. (English summary) **2003h:37029**
Demongeot, Jacques (*with* Aracena, Julio; Lamine, Samia Ben; Meignen, Sylvain; Tonnelier, Arnaud; Thomas, Rene) Dynamical systems and biological regulations. (English summary) **2003b:37040**
Galias, Zbigniew Rigorous investigation of the Ikeda map by means of interval arithmetic. (English summary) **2003h:37030**
Glendinning, P. A. Global attractors of pinched skew products. (English summary) **2003g:37037**
Kaneko, Kunihiko Dominance of Milnor attractors in globally coupled dynamical systems with more than 7 ± 2 degrees of freedom. (English summary)
Kloeden, P. E. (*with* Rubinov, Aleksandr M.) Attracting sets for increasing co-radiant and topical operators. (English summary) **2003g:37038**
Lamine, Samia Ben *see* **Demongeot, Jacques et al.**, **2003b:37040**
Leonov, Gennadiĭ On the localization of attractors of the Liénard equation. (Russian. Russian summary) **2003g:37039**
Meignen, Sylvain *see* **Demongeot, Jacques et al.**, **2003b:37040**
Mierczyński, Janusz (*with* Schreiber, Sebastian J.) Kolmogorov vector fields with robustly permanent subsystems. (English summary) **2003b:37041**
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Thomas, Rene *see* **Demongeot, Jacques et al.**, **2003b:37040**
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Yang, Xiao Song A proof for a theorem on intertwining property of attraction basin boundaries in planar dynamical systems. (English summary) **2003j:37040**
— Structure of basin boundaries of attractors of ODE's on S^2. (English summary) **2003h:37031**

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Carballo, C. M. (*with* Morales, C. A.) Homoclinic classes and finitude of attractors for vector fields on n-manifolds. (English summary) **2003h:37021**
Carbinatto, Maria C. (*with* Rybakowski, Krzysztof P.) Morse decompositions in the absence of uniqueness. (English summary) **2003e:37019**
Chen, Xian Qiang (*with* Zhao, Yi[1]) The attractor and bifurcation of a discrete dynamical system. (Chinese. English and Chinese summaries)
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Foias, Ciprian (*with* Jolly, M. S.; Li, Wing Suet) Nevanlinna-Pick interpolation of attractors. (English summary) **2003h:37141**
Gilmore, Robert (*with* Lefranc, Marc) ★ The topology of chaos. (English summary) **2003k:37051**
Jolly, M. S. *see* **Foias, Ciprian et al.**, **2003h:37141**
Lefranc, Marc *see* **Gilmore, Robert**, **2003k:37051**
Li, Wing Suet *see* **Foias, Ciprian et al.**, **2003h:37141**
Lin, Wen-Wei *see* **Chiu, Chuang-Hsiung et al.**, **2003a:37043**
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Oliva, Waldyr M. Morse-Smale semiflows, openness and A-stability. (English summary) **2003d:37134**
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Tucker, Warwick A rigorous ODE solver and Smale's 14th problem. (English summary) **2003b:37055**
Vilamajó, Francesc *see* **Romero, N. et al.**, **2003b:37064**
Zandonella Necca, Sara *see* **Marzocchi, Alfredo**, **2003a:37021**
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37C75 Stability theory

Chiang, Hsiao-Dong *see* **Lee, Jaewook**, **2003d:37031**
Dong, Ying (*with* Jin, Ming Zhong[2]) Global asymptotic stability of a class of discrete systems. (Chinese. English and Chinese summaries) **2003k:37041**
Figueiredo, Annibal *see* **Gléria, I. M. et al.**, **2003b:37042**
Gléria, I. M. (*with* Figueiredo, Annibal; Rocha Filho, Tarcísio M.) Stability properties of a general class of nonlinear dynamical systems. (English summary) **2003b:37042**
Jin, Ming Zhong[2] *see* **Dong, Ying**, **2003k:37041**
Lee, Jaewook (*with* Chiang, Hsiao-Dong) Theory of stability regions for a class of nonhyperbolic dynamical systems and its application to constraint satisfaction problems. (English summary) **2003d:37031**
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Sonis, Michael (*with* Zhou, Shengfan) Stability and transverse manifolds of periodic points for coupled maps. (English summary) **2003d:37032**
Zadorozhnyĭ, V. F. Friedrichs method in a Lyapunov problem. (English summary) **2003h:37032**
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— (*with* Hegazi, A. S.) On persistence and stability of some spatially inhomogeneous systems. (English summary) **2003a:37115**
Andreev, Aleksandr Sergeevich (*with* Risito, Corrado) On the stability of generalized steady motion. (Russian. Russian summary) **2003i:34121**
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Lines, Marji *see* **Medio, Alfredo**, **2003e:37001**
Liu, Xin He *see* **Mai, Jiehua**, **2003b:39031**
Mai, Jiehua (*with* Liu, Xin He) Existence, uniqueness and stability of C^m solutions of iterative functional equations. (English summary) **2003b:39031**
Medio, Alfredo (*with* Lines, Marji) ★ Nonlinear dynamics. (English summary) **2003e:37001**
Megan, Mihail (*with* Sasu, Adina Luminiţa; Sasu, Bogdan) On a theorem of Rolewicz type for linear skew-product semiflows. (English summary) **2003f:47073**
Miroshnik, I. V. Partial stability and geometric problems of nonlinear dynamics. (Russian. Russian summary) **2003m:34119**

Morales, C. A. (*with* Pacifico, M. J.) Lyapunov stability of ω-limit sets. (English summary) **2003b:37024**
Pacifico, M. J. *see* **Morales, C. A., 2003b:37024**
Pavlotskiĭ, I. P. (*with* Sadovnikov, B. I.; Strianese, M.) Local stability of a singular set of the second type for a second-order ordinary equation. (Russian) **2003e:34085**
Risito, Corrado *see* **Andreev, Aleksandr Sergeevich, 2003i:34121**
Ryashko, Lev B. (*with* Shnol′, È. Ė.) On exponentially attracting invariant manifolds of ODEs. (English summary) **2003m:34120**
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Zhang, Yong Another proof for a combinatorial lemma of Liao. (English and Chinese summaries) **2003d:37024**

37C80 Symmetries, equivariant dynamical systems

Belitskii, G. R. (*with* Kopanskii, A. Ya.) Equivariant Sternberg-Chen theorem. (English summary) **2003e:37029**
Jacquemard, Alain (*with* Teixeira, Marco Antonio) A note on rigid decompositions of reversible mappings. (English summary) **2003f:37047**
Kopanskii, A. Ya. *see* **Belitskii, G. R., 2003e:37029**
Teixeira, Marco Antonio *see* **Jacquemard, Alain, 2003f:37047**

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Ashwin, Peter (*with* Montaldi, James) Group theoretic conditions for existence of robust relative homoclinic trajectories. (English summary) **2003g:37033**
Baake, Michael *see* **Roberts, John A. G., 2003j:37084**
Barrandon, Matthieu Résonance 1 : 2 pour les champs de vecteurs réversibles. (English and French summaries) [1 : 2 resonance for reversible vector fields] **2003a:37064**
Boiron, M. A. *see* **Malasoma, J. M. et al., 2003g:37059**
Fečkan, Michal Topologically transversal reversible homoclinic sets. (English summary) **2003g:37031**
Gaeta, Giuseppe Poincaré normal forms and simple compact Lie groups. (English summary) **2003j:37076**
Golubitsky, Martin (*with* Stewart, Ian N.) Patterns of oscillation in coupled cell systems. (English summary) **2003j:34063**
Izydorek, Marek Equivariant Conley index in Hilbert spaces and applications to strongly indefinite problems. **2003f:37029**
Jacquemard, Alain (*with* Teixeira, Marco Antonio) Effective algebraic geometry and normal forms of reversible mappings. (English summary) **2003g:58064**
Lamb, Jeroen S. W. (*with* Wulff, Claudia) Reversible relative periodic orbits. (English summary) **2003f:37084**
Malasoma, J. M. (*with* Werny, P.; Boiron, M. A.) Multichannel type-I intermittency in two models of Rayleigh-Bénard convection. (English summary) **2003g:37059**
Malhotra, Naresh (*with* Sri Namachchivaya, N.) Local bifurcations in the motion of spinning discs. (English summary) **2003d:70031**
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Roberts, John A. G. (*with* Baake, Michael) Symmetries and reversing symmetries of area-preserving polynomial mappings in generalised standard form. (English summary) **2003j:37084**
da Rocha Medrado, João Carlos (*with* Teixeira, Marco Antonio) Codimension-two singularities of reversible vector fields in 3D. (English summary) **2003f:37081**
Sottocornola, Nicola Robust homoclinic cycles in $\mathbb{R}^4$. (English summary) **2003k:37034**
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Wei, Bao She Existence of invariant tori for certain weakly reversible mappings. (English summary) **2003j:37095**
Werny, P. *see* **Malasoma, J. M. et al., 2003g:37059**
Wulff, Claudia *see* **Lamb, Jeroen S. W., 2003f:37084**

37C85 Dynamics of group actions other than Z and R, and foliations [See mainly 22Fxx, and also 57R30, 57Sxx]

Adams, Scot Orbit nonproper dynamics on Lorentz manifolds. (English summary) **2003b:37043**
Belliart, Michel On the dynamics of certain actions of free groups on closed real analytic manifolds. (English summary) **2003h:37033**
Druck, Suely (*with* Fang, Fu Quan; Firmo, Sebastião) Fixed points of discrete nilpotent group actions on S^2. (English and French summaries) **2003i:37018**
Fang, Fu Quan *see* **Druck, Suely et al., 2003i:37018**
Farb, Benson (*with* Shalen, Peter B.) Groups of real-analytic diffeomorphisms of the circle. (English summary) **2003e:37030**
Feres, Renato An introduction to cocycle super-rigidity. (English summary) **2003g:37041**
Ferte, Damien Flot horosphérique des repères sur les variétés hyperboliques de dimension 3 et spectre des groupes kleiniens. (English and French summaries) [Horospherical frame flow on three-dimensional hyperbolic manifolds and spectrum of Kleinian groups] **2003k:37042**
Firmo, Sebastião *see* **Druck, Suely et al., 2003i:37018**
Ghys, Étienne Groups acting on the circle. **2003a:37032**
Hurder, Steven Dynamics and the Godbillon-Vey class: a history and survey. (English summary) **2003b:37044**
Jarque, Xavier (*with* Llibre, Jaume) Polynomial foliations of $\mathbf{R}^2$. (English summary) **2003b:37045**
Kalinin, Boris (*with* Katok, Anatole) Measurable rigidity and disjointness for $\mathbb{Z}^k$ actions by toral automorphisms. (English summary) **2003b:37046**
Katok, Anatole *see* **Kalinin, Boris, 2003b:37046**
Ledrappier, François (*with* Pollicott, Mark) Ergodic properties of linear actions of (2×2)-matrices. (English summary) **2003j:37041**
Llibre, Jaume *see* **Jarque, Xavier, 2003b:37045**
Pollicott, Mark *see* **Ledrappier, François, 2003j:37041**
dos Santos, Nathan M. Actions of Lie groups on closed manifolds. (English summary) **2003d:37033**
Shalen, Peter B. *see* **Farb, Benson, 2003e:37030**
Török, Andrei Rigidity of partially hyperbolic actions of property (T) groups. (English summary) **2003i:37019**

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Adams, Scot ★ Dynamics on Lorentz manifolds. (English summary) **2003c:53101**
— Induction of geometric actions. (English summary) **2003c:53102**
Anosov, D. V. Flows on closed surfaces and related geometric problems. (Russian. Russian summary) **2003h:37061**
Arraut, José Luis (*with* Schweitzer, Paul A.) A note on actions of the cylinder $S^1 \times \mathbf{R}$. (English summary) **2003f:57071**
Boland, Jeffrey (*with* Connell, Christopher) Minimal entropy rigidity for foliations of compact spaces. (English summary) **2003e:53048**
Calegari, Danny Foliations with one-sided branching. (English summary) **2003m:57037**
Cantwell, John C. (*with* Conlon, Lawrence) An interesting class of C^1 foliations. (English summary) **2003m:57058**
Clozel, Laurent (*with* Otal, Jean-Pierre) Unique ergodicité des correspondances modulaires. (English and French summaries) [Unique ergodicity of modular correspondences] **2003g:22003**
Conlon, Lawrence *see* **Cantwell, John C., 2003m:57058**
Connell, Christopher *see* **Boland, Jeffrey, 2003e:53048**
Conze, Jean-Pierre (*with* Guivarc'h, Yves) Densité d'orbites d'actions de groupes linéaires et propriétés d'équidistribution de marches aléatoires. (English and French summaries) [Density of orbits of linear group actions and uniform distribution properties of random walks] **2003m:37005**
Coornaert, Michel (*with* Knieper, Gerhard) Growth of conjugacy classes in Gromov hyperbolic groups. (English summary) **2003f:20071**
Dani, Shrikrishna G. On conjugacy classes of closed subgroups and stabilizers of Borel actions of Lie groups. (English summary) **2003i:22023**
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Einsiedler, Manfred (*with* Schmidt, Klaus[1]) The adjoint action of an expansive algebraic $\mathbb{Z}^d$-action. (English summary) **2003b:37003**
Etnyre, John B. (*with* Ghrist, Robert W.) Contact topology and hydrodynamics. II. Solid tori. (English summary) **2003e:37132**
Farb, Benson (*with* Shalen, Peter B.) Real-analytic, volume-preserving actions of lattices on 4-manifolds. (English and French summaries) **2003e:57055**
Fawaz, Amine A note on Riemannian flows on 3-manifolds. (English summary) **2003m:53039**
Fenley, Sérgio R. Foliations, topology and geometry of 3-manifolds: **R**-covered foliations and transverse pseudo-Anosov flows. (English summary) **2003g:57044**
Feres, Renato (*with* Katok, Anatole) Ergodic theory and dynamics of G-spaces (with special emphasis on rigidity phenomena). **2003j:37005**
— (*with* Witte, Dave) Groups that do not act by automorphisms of codimension-one foliations. (English summary) **2003e:57047**
Firmo, Sebastião *see* **Druck, Suely, 2003j:57046**
Fisher, David Michael Rigid geometric structures and representations of fundamental groups. (English summary) **2003g:22007**
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Hagiwara, Yohsuke (*with* Mizutani, Tadayoshi) Leibniz algebras associated with foliations. (English summary) **2003g:17001**
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Labourie, François Fuchsian affine actions of surface groups. (English summary) **2003d:57061**
Lins Neto, Alcides Some examples for the Poincaré and Painlevé problems. (English and French summaries) **2003j:34009**
Liousse, Isabelle Actions affines sur les arbres réels. (English and French summaries) [Affine actions on real trees] **2003a:20044**
Margulis, Grigorii A. (*with* Qian, Nantian) Rigidity of weakly hyperbolic actions of higher real rank semisimple Lie groups and their lattices. (English summary) **2003a:22019**
Matsumoto, Shigenori On the global rigidity of split Anosov $\mathbf{R}^n$-actions. (English summary) **2003k:37045**
Matthews, Paul C. *see* **Dawes, J. H. P. et al., 2003k:37075**
Mitsumatsu, Yoshihiko Foliations and contact structures on 3-manifolds. (English summary) **2003c:57029**
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Niţică, Viorel (*with* Török, Andrei) On the cohomology of Anosov actions. (English summary) **2003d:37036**
Oliveira, R. D. S. (*with* Tari, F.) On pairs of regular foliations in the plane. (English summary) **2003k:58068**

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Polterovich, Leonid (*with* Rudnick, Zeév) Kick stability in groups and dynamical systems. (English summary) **2003d:37003**
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Shafarevich, Andrei I. Localized asymptotic solutions of the Navier-Stokes equations and topological invariants of vector fields. Prandtl-Maslov equations on Reeb graphs and Fomenko invariants. (English summary) **2003c:35136**
Shalen, Peter B. *see* **Farb, Benson**, **2003e:57055**
Skorobogatov, D. A. The problem of the isometry of foliations of codimension one. (Russian. English and Uzbek summaries) **2003g:53032**
Tari, F. *see* **Oliveira, R. D. S.**, **2003k:58068**
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Tsuchiya, Nobuo (*with* Yamakawa, Aiko) Rigidity of codimension one locally free actions of solvable Lie groups. (English summary) **2003k:22032**
Vogt, Elmar Foliations with few non-compact leaves. (English summary) **2003f:57053**
Weiss, Barak Dynamics on parameter spaces: submanifold and fractal subset questions. (English summary) **2003j:37007**
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Arecchi, Fortunato T. Complexity and dynamics of scientific discovery. (Italian)
Ashwin, Peter (*with* Fu, Xin-Chu) On the dynamics of some nonhyperbolic area-preserving piecewise linear maps. (English summary) (*see* **2003d:94003**)
Balmforth, Neil J. (*with* Provenzale, Antonello; Sassi, Roberto) A hierarchy of coupled maps. (English summary) **2003j:37042**
Cushman, Richard (*with* Duistermaat, J. J.) Non-Hamiltonian monodromy. (English summary) **2003c:37035**
Dodson, Maurice Exceptional sets in dynamical systems and Diophantine approximation. (English summary) **2003h:37034**
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Duzhin, Fedor S. Lower bounds for the number of closed billiard trajectories of period 2 and 3 in manifolds embedded in Euclidean space. **2003k:37043**
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Ganikhodzhaev, R. N. (*with* Abdirakhmanova, R. È.) Description of quadratic automorphisms of a finite-dimensional simplex. (Russian. English and Uzbek summaries) **2003m:37031**
Kataoka, Naoto Dynamical networks in iterated function dynamics. (Japanese. Japanese summary) (*see* **2003a:37001**)
Lani-Wayda, Bernhard Representing Poincaré maps by return times. (English summary) **2003f:37048**
Menon, Govind Gradient systems with wiggly energies and related averaging problems. (English summary) **2003f:37049**
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Alvarez, Felipe (*with* Attouch, H.; Bolte, Jérôme Jean-Marie; Redont, P.) A second-order gradient-like dissipative dynamical system with Hessian-driven damping. Application to optimization and mechanics. (English summary) **2003j:34104**
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Fofana, M. S. Spectral decomposition in one parameter delay differential equations. (English summary) **2003b:34157**
– Effects of time delays near centre manifold. (English summary) **2003b:34158**
Gasull, Armengol (*with* Mañosa, Víctor) A Darboux-type theory of integrability for discrete dynamical systems. (English summary) **2003k:39023**
Gralewicz, P. (*with* Kowalski, Krzysztof) Continuous time evolution from iterated maps and Carleman linearization. (English summary) **2003c:34081**
Grammaticos, B. *see* **Ramani, A. et al.**, **2003k:39024**
Hamaya, Yoshihiro *see* **Naito, Toshiki et al.**, **2003g:39008**
Hilger, Stefan Matrix Lie theory and measure chains. (English summary) **2003j:22028**
Kloeden, P. E. (*with* Sadovskiĭ, Boris N.; Vasilyeva, I. E.) Quasi-flows and equations with nonlinear differentials. **2003h:34012**
Kondo, Koichi (*with* Nakamura, Yoshimasa) Determinantal solutions of solvable chaotic systems. (English summary) **2003i:37095**
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Kulik, V. L. (*with* Pączko, D.) The invariant toruses of linear extensions of dynamic systems. (English summary) **2003a:34067**
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Marchuk, N. A. On continuity of the invariant torus for countable system of difference equations dependent on parameters. (English summary) **2003d:39022**
Miyazaki, R. *see* **Naito, Toshiki et al.**, **2003g:39008**
Mizin, D. A. On the global structure of a dynamical system. (Russian. English and Russian summaries) **2003j:37018**
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37Dxx Dynamical systems with hyperbolic behavior

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37D10 Invariant manifold theory

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37D20 Uniformly hyperbolic systems (expanding, Anosov, Axiom A, etc.)

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37D25 Nonuniformly hyperbolic systems (Lyapunov exponents, Pesin theory, etc.)

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37D30 Partially hyperbolic systems and dominated splittings

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37D40 Dynamical systems of geometric origin and hyperbolicity (geodesic and horocycle flows, etc.)

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37D50 Hyperbolic systems with singularities (billiards, etc.)

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37Exx Low-dimensional dynamical systems

37E05 Maps of the interval (piecewise continuous, continuous, smooth)

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37E20 Universality, renormalization [see also 37F25]

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37E25 Maps of trees and graphs

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Liu, Xin He *see* **Sun, Tai Xiang et al., 2003k:37056**
Los, Jérôme E. *see* **Alsedà, Lluís et al., 2003m:37052**
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37E30 Homeomorphisms and diffeomorphisms of planes and surfaces

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37E35 Flows on surfaces

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Aranson, S. Kh. (*with* Zhuzhoma, E. V.) Circle at infinity influences on the smoothness of surface flows. (English summary) **2003d:37055**
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37E40 Twist maps

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Dullin, Holger R. (*with* Meiss, J. D.) Twist singularities for symplectic maps. (English summary) **2003m:37071**
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Qian, Tifei (*with* Xia, Zhihong) Heteroclinic orbits and chaotic invariant sets for monotone twist maps. (English summary) **2003j:37097**
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37E45 Rotation numbers and vectors

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Chas, Moira *see* **Alsedà, Lluís et al., 2003b:37059**
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Kuznetsov, Sergei Petrovich[1] Torus fractalization and intermittency. (English summary) **2003e:37041**
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Lopes Dias, João Renormalization scheme for vector fields on $\mathbb{T}^2$ with a Diophantine frequency. (English summary) **2003d:37049**
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Ashwin, Peter (*with* Fu, Xin-Chu) On the geometry of orientation-preserving planar piecewise isometries. (English summary) **2003e:37053**
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Gómez, Adriana (*with* Meiss, J. D.) Volume-preserving maps with an invariant. (English summary) **2003b:37063**
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Cushing, J. M. (*with* Henson, Shandelle M.) Global dynamics of some periodically forced, monotone difference equations. (English summary) **2003e:39017**
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37F15 Expanding maps; hyperbolicity; structural stability

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37F20 Combinatorics and topology

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37F25 Renormalization

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37F30 Quasiconformal methods and Teichmüller theory; Fuchsian and Kleinian groups as dynamical systems

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37F35 Conformal densities and Hausdorff dimension

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37F45 Holomorphic families of dynamical systems; the Mandelbrot set; bifurcations

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37F50 Small divisors, rotation domains and linearization; Fatou and Julia sets

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37F75 Holomorphic foliations and vector fields [see also 32M25, 32S65, 34Mxx]

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37G05 Normal forms

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37G10 Bifurcations of singular points

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37G15 Bifurcations of limit cycles and periodic orbits

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37G35 Attractors and their bifurcations

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37Hxx Random dynamical systems [see also 15A52, 34D08, 34F05, 47B80, 70L05, 82C05, 93Exx]

37H05 Foundations, general theory of cocycles, algebraic ergodic theory [see also 37Axx]

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37H10 Generation, random and stochastic difference and differential equations [see also 34F05, 34K50, 60H10, 60H15]

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37H15 Multiplicative ergodic theory, Lyapunov exponents [see also 34D08, 37Axx, 37Cxx, 37Dxx]

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37H20 Bifurcation theory [see also 37Gxx]

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"Bailout embeddings, targeting of invariant tori, and the control of Hamiltonian chaos" Publisher's note: "Bailout embeddings, targeting of invariant tori, and the control of Hamiltonian chaos" [Phys. Rev. E (3) **65** (2002), no. 4, 045203, 4 pp.; MR 2003h:37108a] by J. H. E. Cartwright, M. O. Magnasco and O. Piro. **2003h:37108b**

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37Kxx Infinite-dimensional Hamiltonian systems [see also 35Axx, 35Qxx]

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37K05 Hamiltonian structures, symmetries, variational principles, conservation laws

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37M15 Symplectic integrators

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37M20 Computational methods for bifurcation problems

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37M25 Computational methods for ergodic theory (approximation of invariant measures, computation of Lyapunov exponents, entropy)

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37Nxx Applications

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37N05 Dynamical systems in classical and celestial mechanics [See mainly 70Fxx, 70Hxx, 70Kxx]

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37N30 Dynamical systems in numerical analysis

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39Bxx Functional equations and inequalities [see also 30D05]

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39B12 Iteration theory, iterative and composite equations [see also 26A18, 30D05, 37–XX]

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39B22 Equations for real functions [see also 26A51, 26B25]

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39B52 Equations for functions with more general domains and/or ranges

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39B55 Orthogonal additivity and other conditional equations

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39B62 Functional inequalities, including subadditivity, convexity, etc. [see also 26A51, 26B25, 26Dxx]

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39B72 Systems of functional equations and inequalities

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Nakanishi, Tomoki *see* **Kuniba, Atsuo et al., 2003e:81085**
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— (*with* Shin, Joon-Kook) Generalized Jensen's equations in Banach modules. (English summary) **2003j:46070**
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Pečarić, Josip E. *see* **Budimir, I. et al., 2003d:26024** *and* **Dragomir, Sever Silvestru et al., 2003j:26017**
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Tabor, Jacek (*with* Tabor, Józef) Geometrical aspects of stability. (English summary) **2003e:41045**
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Trif, Tiberiu On the stability of a general gamma-type functional equation. (English summary) **2003e:39052**
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Wang, Feng Yu Coupling, convergence rates of Markov processes and weak Poincaré inequalities. (English summary) **2003m:60203**
Wang, Jian[7] The stability of approximately additive solutions on Davison equations. (English summary) **2003d:39048**

39B82 Stability, separation, extension, and related topics [see also 46A22]

Badora, Roman (*with* Ger, Roman) On some trigonometric functional inequalities. (English summary) **2003e:39061**
Budzik, Dorota Stability properties of monomial functions. (English summary) **2003k:39036**
Cabello Sánchez, Félix The singular case in the stability of additive functions. **2003b:39040**

Chang, Ick-Soon (*with* Kim, Hark-Mahn) On the Hyers-Ulam stability of quadratic functional equations. (English summary) **2003f:39092**
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Gilányi, Attila On approximately monomial functions. (English summary) **2003e:39062**
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— (*with* Sahoo, Prasanna K.) Stability of a functional equation of Drygas. (English summary) **2003k:39037**
— (*with* Sahoo, Prasanna K.) Hyers-Ulam stability of a generalized Hosszú functional equation. (English summary) **2003k:39038**
— (*with* Kim, Byungbae) Local stability of the additive functional equation and its applications. (English summary) **2003m:39042**
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Kim, Hark-Mahn *see* **Chang, Ick-Soon**, **2003f:39092**
Kim, Young-Ho On the Hyers-Ulam-Rassias stability of an equation of Davison. (English summary) **2003f:39093**
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— Modified Trif's functional equations in Banach modules over a C^*-algebra and approximate algebra homomorphisms. (English summary) **2003k:39039**
Rassias, John Michael Hyers-Ulam stability for a quadratic functional equation in several variables. (English summary) **2003j:39080**
— On the Ulam stability of mixed type mappings on restricted domains. (English summary) **2003k:39040**
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Dilworth, S. J. (*with* Howard, Ralph; Roberts, James W.) Extremal approximately convex functions and the best constants in a theorem of Hyers and Ulam. (English summary) **2003m:26017**
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Gilányi, Attila On a problem by K. Nikodem. (English summary) **2003j:39075**
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39B99 None of the above, but in this section

Deeba, Elias (*with* de Korvin, Andre) A new approach for studying fuzzy functional equations. (English summary) **2003b:39041**
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Silva Ferreira, José Manuel On the stability and oscillatory behavior of a retarded functional equation. (English summary) **2003g:39013**
Simovici, Dan A. *see* **Jaroszewicz, Szymon**, (**2003a:00026**)
Vidal, Claudio *see* **Cuevas, Claudio**, **2003g:39006**
Villanueva, Jordi *see* **Seara, Tere M.**, **2003a:37085**

40–XX Sequences, series, summability

40–01 Instructional exposition (textbooks, tutorial papers, etc.)

(Cohn, Leslie) *see* **Gelfand, Sergei I. et al.**
Gelfand, Sergei I. (*with* Gerver, M. L.; Kirillov, Aleksandr Aleksandrovich; Konstantinov, N. N.; Kushnirenko, A. G.) ★ Sequences, combinations, limits. (English summary)
Gerver, M. L. *see* **Gelfand, Sergei I. et al.**
Kirillov, Aleksandr Aleksandrovich *see* **Gelfand, Sergei I. et al.**
Konstantinov, N. N. *see* **Gelfand, Sergei I. et al.**
Kushnirenko, A. G. *see* **Gelfand, Sergei I. et al.**
(Teller, Joan) *see* **Gelfand, Sergei I. et al.**

40–03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 40–03

(Bayes, Thomas) *see* **Bellhouse, D. R., 2003j:01009**
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Español, Luis (*with* Sánchez Fernández, Carlos) Julio Rey Pastor and the theory of summable divergent series. (Spanish. English and Spanish summaries) **2003c:01030**
(Euler, Leonhard) *see* **Pavlidis, V. D., 2003h:01014** *and* **Matvievskaya, G. P., 2003i:01016**
Ferraro, Giovanni Convergence and formal manipulation of series from the origins of calculus to about 1730. (English summary) **2003c:01019**
Matvievskaya, G. P. (*with* Pavlidis, V. D.) Euler's notebooks: notes concerning analytic number theory, series, and continued fractions. (Russian. English summary) **2003i:01016**
Narayana Iyer, S. Some theorems in summation. (*see* **2003a:01024**)
Pavlidis, V. D. Continued fractions in the investigations of L. Euler. (Russian) **2003h:01014**
— *see also* **Matvievskaya, G. P., 2003i:01016**
(Rey Pastor, Julio) *see* **Español, Luis, 2003c:01030**
Sánchez Fernández, Carlos *see* **Español, Luis, 2003c:01030**
Trojovský, Pavel Roots and the developments of the concept of a convergent numerical series. (Czech) (*see* **2003b:01002**)
Veselý, Jiří On some important series. (Czech) (*see* **2003b:01002**)

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Biography:
Bayes, Thomas *see* **Bellhouse, D. R., 2003j:01009**
Rey Pastor, Julio *see* **Español, Luis, 2003c:01030**

40–06 Proceedings, conferences, collections, etc.

Items with secondary classifications in 40–06

(Dikshit, H. P.) *see* **Analysis and applications, 2003k:00013**
(Jain, Pawan Kumar) *see* **Analysis and applications, 2003k:00013**
(Pati, Tribikram) *see* **Analysis and applications, 2003k:00013**

Items listed otherwise than by author

Analysis and applications ★ Analysis and applications. **2003k:00013**
Festschrift:
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Ujjain ★ Analysis and applications. **2003k:00013**

40Axx Convergence and divergence of infinite limiting processes

40A05 Convergence and divergence of series and sequences

Benyi, Arpad An Olympiad problem, Euler's sequence, and Stirling's formula. **2003h:40001**
Bor, Hüseyin (*with* Özarslan, H. S.) On the quasi power increasing sequences. (English summary) **2003j:40001**
Chandra, Prem On Abel's theorem for series of positive decreasing terms. (English summary) **2003m:40001**
Costara, Constantin On generalized harmonic series $\sum_{n=1}^{\infty} 1/n^{\alpha}$. (Romanian)
Das, Pritha *see* **Lahiri, Benoy Kumar, 2003g:40001**
Dasgupta, Hiranmay A generalization of Kummer's test. (English summary) **2003m:40002**
Demirci, Kamil $\mathcal{I}$-limit superior and limit inferior. (English summary) **2003e:40001**
— On lacunary statistical limit points. (English summary) **2003a:40001**
Dindoš, Martin On sign distribution in relatively convergent series. (English summary) **2003c:40001**
Dutta, Chandana *see* **Ganguly, D. K., 2003e:40002** *and* **2003h:40002**
Edely, Osama H. H. *see* **Mursaleen, 2003k:40002**
Ganguly, D. K. (*with* Dutta, Chandana) Some properties of a function connected to a double series. (English summary) **2003h:40002**
— (*with* Dutta, Chandana) On rearrangements of double series. (English summary) **2003e:40002**
Glaister, P. Logarithmic series. (English summary)
Hančl, Jaroslav Irrational rapidly convergent series. (English summary) **2003h:40003**
Kantawala, P. S. On the summability of double orthogonal series.
Kwon, Joong Sung (*with* Sung, Soo Hak) On lacunary statistical and p-Cesàro summability of fuzzy numbers. (English summary) **2003b:40001**
Lahiri, Benoy Kumar (*with* Das, Pritha) On some properties connecting infinite series. (English summary) **2003g:40001**
Leindler, László Three theorems connected with δ-quasi monotone sequences and their application to an integrability theorem. (English summary) **2003b:40002**
Lembarki, A. Quasi-linear sequence transformations and their construction. (English summary) **2003c:40002**
Luh, Wolfgang (*with* Trautner, Rolf) Relations between positive series and integrals. (English summary) **2003m:40003**
Miller, H. I. (*with* Orhan, C.) On almost convergent and statistically convergent subsequences. (English summary) **2003k:40001**
Moreno García, Juan The age and composition of sherry: quantitative study of a traditional practice. (Spanish)
Móricz, Ferenc (*with* Rhoades, Billy E.) An equivalent reformulation of summability by weighted mean methods, revisited. (English summary) **2003c:40003**
Mursaleen (*with* Edely, Osama H. H.) On some statistical core theorems. (English summary) **2003k:40002**
Narayana Iyer, S. Some theorems in summation. (*see* **2003a:01024**)
Natarajan, P. N. (*with* Srinivasan, Vaithinathsamy) Silvermann-Toeplitz theorem for double sequences and series and its application to Nörlund means in non-Archimedean fields. (English summary) **2003f:40001**
Nishimoto, Katsuyuki *see* **Purohit, Manju et al., 2003i:40001**
Nuray, Fatih (*with* Ruckle, William H.) Measures of affinity of a sequence for a number. (English summary) **2003m:40004**
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Osler, Thomas J. (*with* Wright, Marcus) A tale of two series. **2003d:40001**
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Pataki, Gergely On the convergence of the series $\sum a_n^{1-x_n/n}$. (English summary) **2003f:40002**
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Purohit, Manju (*with* Parihar, C. L.; Nishimoto, Katsuyuki) On some double infinite sums. (English summary) **2003i:40001**
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Singh, Niranjan (*with* Sharma, Neeta) On product of double sequences. (English summary) **2003a:40002**
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Swartz, Charles Interchanging orders of summation for multiplier convergent series. (English summary) **2003e:40003**
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Tripathy, Binod Chandra (*with* Sen, Mausumi) On a new class of sequences related to the space l^p. (English summary) **2003f:40003**
Wright, Marcus *see* **Osler, Thomas J., 2003d:40001**
Yingying, Li On Euler's constant—calculating sums by integrals.

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Al-Khaled, Kamel On the rate of convergence for the Chebyshev series. (English summary) **2003b:41023**
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Bataineh, Ahmad H. A. *see* **Ahmad, Z. U., 2003f:42005**
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Boos, Johann (*with* Leiger, Toivo) Dual pairs of sequence spaces. (English summary) **2003a:46017**
— *see also* **Zeltser, Maria et al., 2003m:46011**
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Butković, Davor Fubini revisited. (English summary) **2003e:40004**
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Connor, Jeff (*with* Demirci, Kamil; Orhan, C.) Multipliers and factorizations for bounded statistically convergent sequences. (English summary) **2003k:46003**
Das, Pratulananda *see* **Lahiri, Benoy Kumar, 2003h:46017**
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Khosravi, Amir (*with* Khosravi, Behrooz) Generalization of Dirichlet's test and Abel's test. (English summary) **2003g:46052**
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Lahiri, Benoy Kumar (*with* Das, Pratulananda) Subseries in Banach spaces. (English summary) **2003h:46017**

Lal, Shiva Narain (*with* Bhattacharya, S.; Reddi, E. Keshava) Convergence of Cauchy sequences in 2-normed spaces. (English summary) **2003g:46020**
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Leindler, László A new class of numerical sequences and its applications to sine and cosine series. (English summary) **2003m:42010**
Liflyand, Elijah On quasi-monotone functions and sequences. (English summary) **2003k:46023**
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Saad, Nasser (*with* Hall, Richard L.) Closed-form sums for some perturbation series involving hypergeometric functions. (English summary) **2003j:33046**
Saealle, Natalia (*with* Türnpu, Heino) Riesz summability with speed of orthogonal series. (English summary)
Savaş, Ekrem Some sequence spaces and statistical convergence. (English summary) **2003e:40008**
— (*with* Rhoades, Billy E.) On some new sequence spaces of invariant means defined by Orlicz functions. (English summary) **2003d:46011**
Srivastava, Hari M. Remarks on a sum containing factorials. (English summary) **2003d:33008**
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Yang, Bi Cheng On a new inequality similar to Hardy-Hilbert's inequality. (English summary) **2003j:26024**
Zeltser, Maria (*with* Boos, Johann; Leiger, Toivo) Sequences of 0's and 1's: new results via double sequence spaces. (English summary) **2003m:46011**
Zhang, Yu Sen (*with* Chen, Wei) Two summation formulas for q-series. (Chinese. English and Chinese summaries)
Zheng, Shao Wei *see* **Liu, Wei Qun**

40A15 Convergence and divergence of continued fractions [see also 30B70]

Baran, O. Ē. *see* **Dmitrishin, R. Ī., 2003g:40002**
Beardon, Alan F. The Hillan-Thron theorem in higher dimensions. (English summary) **2003m:40007**
Bodnar, D. Ī. (*with* Dmitrishin, R. Ī.) On the convergence of multidimensional g-fraction. (English and Russian summaries) **2003j:40003**
Buslaeva, S. F. On Perron's theorem for compositions of linear-fractional transformations. (Russian. Russian summary) **2003j:40004**
Castro Smirnova, Mirta Convergence conditions for vector Stieltjes continued fractions. (English summary) **2003a:40003**
Dmitrishin, R. Ī. (*with* Baran, O. Ē.) Some types of branched continued fractions corresponding to multiple power series. (Ukrainian. Ukrainian summary) **2003g:40002**
— *see also* **Bodnar, D. Ī., 2003j:40003**
Kuchmīns'ka, Kh. Ī. On the convergence of two-dimensional continued fractions. (Ukrainian. Ukrainian summary) (*see* **2003d:41002**)
Lorentzen, Lisa On the convergence of limit periodic continued fractions $K(a_n/1)$ where $a_n \to -\frac{1}{4}$. IV. (English summary) **2003g:40003**
Shmoĭlov, V. I. (*with* Zayats, I. A.; Sloboda, M. Z.) ★ Расходящиеся непрерывные дроби. (Russian. Russian summary) [Diverging continued functions] **2003h:40005**
Sloboda, M. Z. *see* **Shmoĭlov, V. I. et al., 2003h:40005**
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Antonova, T. M. (*with* Bodnar, D. Ī.) Domains of convergence of branched continued fractions of a special type. (Ukrainian. Ukrainian summary) **2003h:30005**
Beardon, Alan F. Continued fractions, discrete groups and complex dynamics. (English summary) **2003m:30010**
Bodnar, D. Ī. *see* **Antonova, T. M., 2003h:30005**
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Khrushchev, Sergei *see* **Golīns'kiĭ, L. B., 2003f:42035**
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Lorentzen, Lisa Recurrence relations in continued fraction theory. (English summary) **2003j:39005**
— Convergence of corresponding continued fractions. **2003m:30011**
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Shkredov, I. D. Recurrence of incomplete quotients of continued fractions. (Russian) **2003k:37014**
Telega, Józef Joachim *see* **Gilewicz, Jacek et al., 2003d:41023**
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40A20 Convergence and divergence of infinite products

Protasov, V. Yu. On the decay of infinite products of trigonometric polynomials. (Russian. Russian summary) **2003k:40003**

40A25 Approximation to limiting values (summation of series, etc.) {For the Euler-Maclaurin summation formula, see 65B15.}

Dmitrishin, R. Ī. The multidimensional g-fraction corresponding to the formal N-multiple power series. (Ukrainian. English, Russian and Ukrainian summaries)
Harper, James D. Another simple proof of $1 + \frac{1}{2^2} + \frac{1}{3^2} + \cdots = \frac{\pi^2}{6}$.
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Bradley, David M. *see* **Bowman, Douglas C., 2003c:33021**
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Hsieh, Tsai-Ming *see* **Lin, Shy-Der et al., 2003j:33004**
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Ogreid, Odd Magne (*with* Osland, Per) Some infinite series related to Feynman diagrams. (English summary) **2003g:11145**
Osland, Per *see* **Ogreid, Odd Magne, 2003g:11145**
Saad, Nasser (*with* Hall, Richard L.) Closed-form sums for some perturbation series involving hypergeometric functions. (English summary) **2003j:33046**
Srivastava, Hari M. *see* **Lin, Shy-Der et al., 2003j:33004**
Tu, Shih Tong *see* **Lin, Shy-Der et al., 2003j:33004**
Walker, Peter L. The zeros of the partial sums of the exponential series.

40A30 Convergence and divergence of series and sequences of functions

Hooshmand Estahbanti, M. H. Limit summability of real functions. (English summary) **2003f:40004**
Kumar, Rakesh[1] (*with* Kumar, Sudhir) Transformation of P_t-matrices relative to a function space. (English summary)
Kumar, Sudhir *see* **Kumar, Rakesh[1]**
Rebillard, L. *see* **Ronveaux, A., 2003d:40002**
Ronveaux, A. (*with* Rebillard, L.) Expansion of multivariable polynomials in products of orthogonal polynomials in one variable. (English summary) **2003d:40002**
Sun, Dao Chun The low order of Dirichlet series of infinite order. (Chinese. English and Chinese summaries)
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Al-Jarrah, Ali A. (*with* Dempsey, K. M.; Glasser, M. L.) Generalized series of Bessel functions. (English summary) **2003c:33008**
(Bayes, Thomas) *see* **Bellhouse, D. R., 2003j:01009**
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Gadzhiev, A. D. (*with* Orhan, C.) Some approximation theorems via statistical convergence. (English summary) **2003f:41041**
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Karadzhov, G. E. Riesz summability of Hermite series. (English summary) **2003d:42043**
Orhan, C. *see* **Gadzhiev, A. D., 2003f:41041**
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Bayes, Thomas *see* **Bellhouse, D. R., 2003j:01009**

40A99 None of the above, but in this section

Items with secondary classifications in 40A99

Leindler, László Embedding relations of classes of numerical sequences. (English summary) **2003m:42009**
Wang, Geping (*with* Xi, Xiao-yong) Convergence of sequences on the fuzzy real line. (English summary) **2003b:26023**
Xi, Xiao-yong *see* **Wang, Geping, 2003b:26023**

40B05 Multiple sequences and series (should also be assigned at least one other classification number in this section)

Butković, Davor Fubini revisited. (English summary) **2003e:40004**
Patterson, Richard F. Characterization for the limit points of stretched double sequences. (English summary) **2003e:40005**
Zeltser, Maria On conservative matrix methods for double sequence spaces. (English summary) **2003c:40005**

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Bowman, Douglas C. (*with* Bradley, David M.) Multiple polylogarithms: a brief survey. (English summary) **2003c:33021**
Bradley, David M. *see* **Bowman, Douglas C., 2003c:33021**
Dutta, Chandana *see* **Ganguly, D. K., 2003e:40002**
Ganguly, D. K. (*with* Dutta, Chandana) On rearrangements of double series. (English summary) **2003e:40002**
Kantawala, P. S. On the summability of double orthogonal series.
Kováčik, Ondrej Once more on the double Fourier-Haar series. (English summary) **2003h:42043**
López García, José Luis A family of analytically summable series with special functions coefficients. (English summary) (*see* **2003a:00031**)
Natarajan, P. N. (*with* Srinivasan, Vaithinathsamy) Silvermann-Toeplitz theorem for double sequences and series and its application to Nörlund means in non-Archimedean fields. (English summary) **2003f:40001**
Nishimoto, Katsuyuki *see* **Purohit, Manju et al., 2003i:40001**
Ogreid, Odd Magne (*with* Osland, Per) Some infinite series related to Feynman diagrams. (English summary) **2003g:11145**
Osland, Per *see* **Ogreid, Odd Magne, 2003g:11145**
Parihar, C. L. *see* **Purohit, Manju et al., 2003i:40001**
Patterson, Richard F. Analogues of some Tauberian theorems for stretchings. (English summary) **2003d:40005**
Purohit, Manju (*with* Parihar, C. L.; Nishimoto, Katsuyuki) On some double infinite sums. (English summary) **2003i:40001**
Sharma, Neeta *see* **Singh, Niranjan, 2003a:40002**
Singh, Niranjan (*with* Sharma, Neeta) On product of double sequences. (English summary) **2003a:40002**
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Yang, Bi Cheng On a new inequality similar to Hardy-Hilbert's inequality. (English summary) **2003j:26024**

40Cxx General summability methods

40C05 Matrix methods

Baral, Kamal Mani *see* **Mishra, Shailendra Kumar, 2003m:40008**
Bilgin, Tunay Matrix transformation on the sequence space $c_0(p, s)$. (English summary) **2003e:40006**
Boos, Johann (*with* Seydel, Detlef) Theorems of Toeplitz-Silverman type for maps defined by sequences of matrices. (English summary) **2003d:40003**
Çakan, Celal *see* **Çoşkun, Hüsamettin et al., 2003k:40004**
Çoşkun, Hüsamettin (*with* Çakan, Celal; Mursaleen) On the statistical and σ-cores. (English summary) **2003k:40004**
King, J. P. Jayasri summability. (English summary) **2003d:40004**
Lemma, Mulatu (*with* Tessema, George) The Abel-type transformations into G_w. (English summary) **2003a:40004**
— Logarithmic transformations into G. (English summary) **2003k:40005**
Mishra, Shailendra Kumar (*with* Baral, Kamal Mani) Certain sequence spaces and matrix transformations from $Sl_\infty(p)$ to c and C. (English summary) **2003m:40008**
Mishra, U. K. (*with* Sahu, K.) On absolute matrix summability of the conjugate series. (English summary) **2003i:40003**
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Rhoades, Billy E. (*with* Savaş, Ekrem) Some necessary conditions for absolute matrix summability factors. (English summary) **2003e:40007**
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Sahu, K. *see* **Mishra, U. K., 2003i:40003**
Savaş, Ekrem *see* **Rhoades, Billy E., 2003e:40007**
Seydel, Detlef *see* **Boos, Johann, 2003d:40003**
Tessema, George *see* **Lemma, Mulatu, 2003a:40004**

Items with secondary classifications in 40C05

Ahmad, Z. U. (*with* Bataineh, Ahmad H. A.) Summability of trigonometric sequences by sequence of infinite matrices. (English summary) **2003f:42005**
Altay, Bilal *see* **Başar, Feyzi, 2003k:46002**
Başar, Feyzi (*with* Altay, Bilal) Matrix mappings on the space $bs(p)$ and its α-, β- and γ-duals. (English summary) **2003k:46002**
Bataineh, Ahmad H. A. *see* **Ahmad, Z. U., 2003f:42005**
Bennett, Grahame (*with* Boos, Johann; Leiger, Toivo) Sequences of 0's and 1's. (English summary) **2003a:46016**
Boos, Johann *see* **Bennett, Grahame et al., 2003a:46016**
Edely, Osama H. H. *see* **Mursaleen, 2003k:40002**
Esi, Ayhan Generalized matrix transformations between some sequence spaces. (English summary) **2003f:46007**
Leiger, Toivo *see* **Bennett, Grahame et al., 2003a:46016**
de Malafosse, Bruno Properties of some sets of sequences and application to the spaces of bounded difference sequences of order μ. (English summary) **2003f:46009**
— (*with* Malkowsky, Eberhard) Sequence spaces and inverse of an infinite matrix. (English summary) **2003g:46003**
Malkowsky, Eberhard *see* **de Malafosse, Bruno, 2003g:46003**
Mursaleen (*with* Edely, Osama H. H.) On some statistical core theorems. (English summary) **2003k:40002**
Patterson, Richard F. Characterization for the limit points of stretched double sequences. (English summary) **2003e:40005**
— Rate preservation of double sequences under l-l type transformation. (English summary) **2003f:42017**
Qu, Wen Bo (*with* Wu, Jun De) On Antosik's lemma and the Antosik-Mikusinski basic matrix theorem. (English summary) **2003i:40007**
Rhoades, Billy E. On the degree of approximation of the conjugate of a function belonging to the weighted $W(L^p, \xi(t))$ class by matrix means of the conjugate series of a Fourier series. (English summary) **2003j:42008**
Saealle, Natalia (*with* Türnpu, Heino) Riesz summability with speed of orthogonal series. (English summary)
Savaş, Ekrem The Steinhaus theorem in p-adic fields. (English summary) **2003m:40006**
Seydel, Detlef Matrix maps of quasi-convex null sequences. (English summary) **2003d:46012**
Suantai, Suthep On matrix transformations of some vector-valued sequence spaces. (English summary) **2003k:46006**
— *see also* **Sudsukh, Chanan, 2003k:46007**
Sudsukh, Chanan (*with* Suantai, Suthep) Matrix transformations on the Maddox vector-valued sequence spaces. (English summary) **2003k:46007**
Türnpu, Heino *see* **Saealle, Natalia**
Wu, Jun De *see* **Qu, Wen Bo, 2003i:40007**
Yardimci, Şeyhmus σ-core for real bounded sequences. (English summary) **2003c:46013**
Zeltser, Maria On conservative matrix methods for double sequence spaces. (English summary) **2003c:40005**

40C15 Function-theoretic methods (including power series methods and semicontinuous methods)

Bilgin, Tunay Matrix transformations of some generalized analytic sequence spaces. (English summary)

Items with secondary classifications in 40C15

Bhardwaj, Vinod K. (*with* Singh, Niranjan) Banach space valued sequence spaces defined by a modulus. (English summary) **2003a:46035**
Das, Gokulananda (*with* Ellipse; Ray, Braja Kishore) Degree of approximation of functions in L^p by power series method of summation. (*see* **2003m:46003**)
Ellipse *see* **Das, Gokulananda et al., (2003m:46003)**
Goonatilake, Rohitha On analytic continuation of summability transforms. (English summary) **2003g:60074**
Kang, Shin Min *see* **Li, Rong Lu et al., 2003g:47056**
Lemma, Mulatu Logarithmic transformations into G. (English summary) **2003k:40005**
Li, Rong Lu (*with* Kang, Shin Min; Swartz, Charles) Operator matrices on topological vector spaces. (English summary) **2003g:47056**
Marotte, F. (*with* Zhang, Changgui) Multisommabilité des séries entières solutions formelles d'une équation aux q-différences linéaire analytique. [Multisummability of formal power series solutions of an analytic linear q-difference equation] **2003d:39031**
McPhedran, R. C. (*with* Nicorovici, N. A.) Static Bloch sums for the square array. (English summary) **2003c:78008**
Nicorovici, N. A. *see* **McPhedran, R. C., 2003c:78008**
Ray, Braja Kishore *see* **Das, Gokulananda et al., (2003m:46003)**
Singh, Niranjan *see* **Bhardwaj, Vinod K., 2003a:46035**
Swartz, Charles *see* **Li, Rong Lu et al., 2003g:47056**
Zhang, Changgui *see* **Marotte, F., 2003d:39031**

40Dxx Direct theorems on summability

40D05 General theorems

Bor, Hüseyin (*with* Özarslan, H. S.) On an application of quasi power increasing sequences. (English summary) **2003f:40005**
Özarslan, H. S. *see* **Bor, Hüseyin, 2003f:40005**

Items with secondary classifications in 40D05

Rhoades, Billy E. Corrigendum: "Inclusion theorems for absolute matrix summability methods" [J. Math. Anal. Appl. **238** (1999), no. 1, 82–90; MR 2000j:40006]. (English summary) **2003m:40009**

Sanz Gil, Javier Summability in a direction of formal power series in several variables. (English summary) **2003e:32002**

40D09 Structure of summability fields

Items with secondary classifications in 40D09

Zeltser, Maria On conservative matrix methods for double sequence spaces. (English summary) **2003c:40005**

40D15 Convergence factors and summability factors

Bor, Hüseyin (*with* Srivastava, Hari M.) Almost increasing sequences and their applications. (English summary) **2003i:40004**
— An application of almost increasing sequences. (English summary) **2003b:40003**
— (*with* Özarslan, H. S.) A note on absolute summability factors. (English summary) **2003m:40010**
Natarajan, P. N. Some properties of the Y-method of summability in complete ultrametric fields. (English summary) **2003f:40006**
Özarslan, H. S. A note on $|\overline{N}p_n;\ \delta|_k$ summability factors. (English summary) **2003c:40006**
— *see also* **Bor, Hüseyin, 2003m:40010**
Patel, N. V. *see* **Tripathi, Sanjay, 2003f:40007**
Srivastava, Hari M. *see* **Bor, Hüseyin, 2003i:40004**
Sulaiman, W. T. Note on convergence and summability factors of an infinite series. **2003a:40005**
— Necessary and sufficient conditions for Nörlund summability. (English summary) **2003m:40011**
Tripathi, Sanjay (*with* Patel, N. V.) On some summability factors of infinite series. (English summary) **2003f:40007**

Items with secondary classifications in 40D15

Özarslan, H. S. On the generalized Cesàro summability factors. (English summary) **2003f:40014**
— Factors for the φ-$|C,\alpha|_k$ summability. (English summary) **2003d:40006**
Rhoades, Billy E. (*with* Savaş, Ekrem) Some summability factor theorems for absolute summability. (English summary) **2003f:40012**
Savaş, Ekrem *see* **Rhoades, Billy E., 2003f:40012**
Sulaiman, W. T. A study on necessary and sufficient conditions concerning summability factors between two absolute summability methods. (English summary) **2003g:40005**
— A general theorem characterizing some absolute summability methods. (English summary) **2003j:40007**
Tuncer, A. Nihal Absolute Cesàro summability factors. (English summary) **2003m:40015**

40D20 Summability and bounded fields of methods

Items with secondary classifications in 40D20

Connor, Jeff (*with* Demirci, Kamil; Orhan, C.) Multipliers and factorizations for bounded statistically convergent sequences. (English summary) **2003k:46003**
Demirci, Kamil *see* **Connor, Jeff et al., 2003k:46003**
Lemma, Mulatu Logarithmic transformations into G. (English summary) **2003k:40005**
Orhan, C. *see* **Connor, Jeff et al., 2003k:46003**
Zeltser, Maria On conservative matrix methods for double sequence spaces. (English summary) **2003c:40005**

40D25 Inclusion and equivalence theorems

Edely, Osama H. H. On Banach core and statistical core of a sequence. (English summary) **2003m:40012**
Li, Jinlu On the core of a sequence in Banach spaces. (English summary) **2003f:40008**
Savaş, Ekrem Some sequence spaces and statistical convergence. (English summary) **2003e:40008**

Items with secondary classifications in 40D25

Boos, Johann (*with* Seydel, Detlef) Theorems of Toeplitz-Silverman type for maps defined by sequences of matrices. (English summary) **2003d:40003**
Kováčik, Ondrej Once more on the double Fourier-Haar series. (English summary) **2003h:42043**
Meronen, Olga (*with* Tali, Anne) Some summability methods b-equivalent to the Cesàro methods. (English and Estonian summaries) **2003h:40007**
Miller, H. I. (*with* Orhan, C.) On almost convergent and statistically convergent subsequences. (English summary) **2003k:40001**
Mursaleen Some analogues of Knopp's core theorem. (English summary) **2003f:46010**
Orhan, C. *see* **Miller, H. I., 2003k:40001**
Osikiewicz, Jeffrey A. Equivalence results for discrete Abel means. (English summary) **2003d:40007**
Rhoades, Billy E. (*with* Savaş, Ekrem) On inclusion relations for absolute summability. (English summary) **2003j:40006**
— Corrigendum: "Inclusion theorems for absolute matrix summability methods" [J. Math. Anal. Appl. **238** (1999), no. 1, 82–90; MR 2000j:40006]. (English summary) **2003m:40009**
— *see also* **Savaş, Ekrem, 2003d:46011**
Savaş, Ekrem (*with* Rhoades, Billy E.) On some new sequence spaces of invariant means defined by Orlicz functions. (English summary) **2003d:46011**
— *see also* **Rhoades, Billy E., 2003j:40006**
Seydel, Detlef *see* **Boos, Johann, 2003d:40003**
Stepanyants, S. A. Tauberian-type conditions that connect Cesàro and Riesz summation methods of different orders. (Russian. English and Russian summaries) **2003a:40008**
Sulaiman, W. T. Notes on necessary and sufficient conditions between two absolute summability methods. (English summary) **2003i:40005**
Tali, Anne *see* **Meronen, Olga, 2003h:40007**
Yardimci, Şeyhmus σ-core for real bounded sequences. (English summary) **2003c:46013**

40Exx Inversion theorems

40E05 Tauberian theorems, general

Borwein, David (*with* Kratz, Werner; Stadtmüller, Ulrich) One-sided Tauberian theorems for Dirichlet series methods of summability. (English summary) **2003f:40009**
Korevaar, Jacob A century of complex Tauberian theory. (English summary) **2003g:40004**
Kratz, Werner *see* **Borwein, David et al., 2003f:40009**
Mishra, Babban Prasad (*with* Srivastava, Anupama) Some Tauberian theorems on (D,α,β) (C,l) summability methods of functions. (English summary) **2003m:40013**
Rogozin, B. A. A Tauberian theorem for increasing functions of dominated variation. (Russian. Russian summary) **2003f:40010**
Srivastava, Anupama *see* **Mishra, Babban Prasad, 2003m:40013**
Stadtmüller, Ulrich *see* **Borwein, David et al., 2003f:40009**

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Kratz, Werner A Tauberian theorem for the Borel method. (English summary) **2003e:40009**
Lemma, Mulatu Logarithmic transformations into G. (English summary) **2003k:40005**
Móricz, Ferenc Tauberian conditions, under which statistical convergence follows from statistical summability $(C,1)$. (English summary) **2003h:40008**
Nurcombe, J. R. Tauberian theorems for absolute generalised Nörlund summability. (English summary) **2003a:40006**
Stepanyants, S. A. Tauberian-type conditions that connect Cesàro and Riesz summation methods of different orders. (Russian. English and Russian summaries) **2003a:40008**

40F05 Absolute and strong summability

Mazhar, S. M. An aspect of local property of $|\overline{N},p_n|_k$ summability of Fourier series. (English summary) **2003f:40011**
Okuyama, Yasuo On absolute generalized Nörlund summability of orthogonal series. (English summary) **2003c:40007**
Özarslan, H. S. Factors for the φ-$|C,\alpha|_k$ summability. (English summary) **2003d:40006**
Rhoades, Billy E. (*with* Savaş, Ekrem) Some summability factor theorems for absolute summability. (English summary) **2003f:40012**
— (*with* Savaş, Ekrem) On inclusion relations for absolute summability. (English summary) **2003j:40006**
Savaş, Ekrem *see* **Rhoades, Billy E., 2003f:40012** *and* **2003j:40006**
Sulaiman, W. T. A study on necessary and sufficient conditions concerning summability factors between two absolute summability methods. (English summary) **2003g:40005**
— Notes on necessary and sufficient conditions between two absolute summability methods. (English summary) **2003i:40005**
— A general theorem characterizing some absolute summability methods. (English summary) **2003j:40007**

Items with secondary classifications in 40F05

Abid, Mohammad *see* **Jena, Subas Chandra, 2003g:40006**
Bor, Hüseyin (*with* Srivastava, Hari M.) Almost increasing sequences and their applications. (English summary) **2003i:40004**
— An application of almost increasing sequences. (English summary) **2003b:40003**
— (*with* Özarslan, H. S.) A note on absolute summability factors. (English summary) **2003m:40010**
Dikshit, G. D. A note on the absolute summability of Fourier series by Bosanquet-Linfoot method. (English summary) **2003b:42014**
Jena, Subas Chandra (*with* Abid, Mohammad) Generalised absolute Cesàro summability of an associated conjugate series. (English summary) **2003g:40006**
Nurcombe, J. R. Tauberian theorems for absolute generalised Nörlund summability. (English summary) **2003a:40006**
Özarslan, H. S. On the generalized Cesàro summability factors. (English summary) **2003f:40014**
— *see also* **Bor, Hüseyin, 2003m:40010**
Pati, Tribikram On the absolute Cesàro summability of Fourier series. **2003a:40007**
Rhoades, Billy E. (*with* Savaş, Ekrem) On absolute Nörlund summability of Fourier series. (English summary) **2003i:42009**
— Corrigendum: "Inclusion theorems for absolute matrix summability methods" [J. Math. Anal. Appl. **238** (1999), no. 1, 82–90; MR 2000j:40006]. (English summary) **2003m:40009**
Savaş, Ekrem *see* **Rhoades, Billy E., 2003i:42009**
Srivastava, Hari M. *see* **Bor, Hüseyin, 2003i:40004**
Sulaiman, W. T. Note on convergence and summability factors of an infinite series. **2003a:40005**
Tuncer, A. Nihal On generalized absolute Cesàro summability factors. (English summary) **2003b:40005**
— Absolute Cesàro summability factors. (English summary) **2003m:40015**
Waszak, Aleksander On the strong convergence in some sequence spaces. (English summary) **2003k:46008**

40Gxx Special methods of summability

40G05 Cesàro, Euler, Nörlund and Hausdorff methods

Abid, Mohammad *see* **Jena, Subas Chandra, 2003g:40006**
Bennett, Grahame What commuting means! (English summary) **2003h:40006**
Chen, Xin Meng *see* **Yu, Chun Wu et al., 2003g:40007**
Dai, Feng *see* **Yu, Chun Wu et al., 2003g:40007**

Jena, Subas Chandra (*with* Swain, Sakuntala) Absolute generalised Cesàro summability of a series associated with Fourier series. (English summary) **2003f:40013**
— (*with* Abid, Mohammad) Generalised absolute Cesàro summability of an associated conjugate series. (English summary) **2003g:40006**
Lal, Shyam On (N, p_n) summability of Legendre series. (English summary) **2003b:40004**
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40J05 Summability in abstract structures [see also 43A55, 46A35, 46B15]

41–XX Approximations and expansions {For all approximation theory in the complex domain, see 30E05 and 30E10; for all trigonometric approximation and interpolation, see 42A10 and 42A15; for numerical approximation, see 65Dxx.}

41–01 Instructional exposition (textbooks, tutorial papers, etc.)

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41–06 Proceedings, conferences, collections, etc.

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41A05 Interpolation [see also 42A15 and 65D05]

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41A36 Approximation by positive operators

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41A44 Best constants

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41A45 Approximation by arbitrary linear expressions

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41A46 Approximation by arbitrary nonlinear expressions; widths and entropy

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41A50 Best approximation, Chebyshev systems

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41A80 Remainders in approximation formulas

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41A99 Miscellaneous topics

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42–XX Fourier analysis

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42–06 Proceedings, conferences, collections, etc.

(Aldroubi, Akram) *see* **Frames**
(Jain, Pawan Kumar) *see* **Wavelets and allied topics, 2003k:42003**
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42Axx Fourier analysis in one variable

42A05 Trigonometric polynomials, inequalities, extremal problems

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42A10 Trigonometric approximation

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42A20 Convergence and absolute convergence of Fourier and trigonometric series

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42A24 Summability and absolute summability of Fourier and trigonometric series

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42A32 Trigonometric series of special types (positive coefficients, monotonic coefficients, etc.)

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42A38 Fourier and Fourier-Stieltjes transforms and other transforms of Fourier type

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42A55 Lacunary series of trigonometric and other functions; Riesz products

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42A61 Probabilistic methods

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42A63 Uniqueness of trigonometric expansions, uniqueness of Fourier expansions, Riemann theory, localization

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42A65 Completeness of sets of functions

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42A70 Trigonometric moment problems

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42A75 Classical almost periodic functions, mean periodic functions [see also 43A60]

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42A82 Positive definite functions

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42A85 Convolution, factorization

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42Bxx Fourier analysis in several variables {For automorphic theory, see mainly 11F30.}

42B05 Fourier series and coefficients

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Ebralidze, A. On the convergence of multiple lacunary trigonometric series almost everywhere. (English and Georgian summaries)
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42B08 Summability

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Alimov, Shavkat On the eigenfunction expansion of a piecewise smooth function. (English summary) **2003m:42027**
Berens, Hubert (*with* Li, Zhongkai; Xu, Yuan[1]) On $l-1$ Riesz summability of the inverse Fourier integral. (English summary) **2003g:42015**
Goginava, Ushangi On the uniform summability of multiple trigonometric Fourier series. — Cesaro means of N-dimensional trigonometric Fourier series. (English and Georgian summaries)
González Vieli, Francisco Javier Fourier inversion of distributions with support on a plane curve. (English summary) **2003d:42018**
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Mishra, U. K. (*with* Sahu, K.) On absolute matrix summability of the conjugate series. (English summary) **2003i:40003**
Móricz, Ferenc Extension of a theorem of Fejér to double Fourier-Stieltjes series. (English summary) **2003c:42009**
Sahu, K. *see* **Mishra, U. K.**, **2003i:40003**
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42B10 Fourier and Fourier-Stieltjes transforms and other transforms of Fourier type

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Bloshanskiĭ, I. L. A criterion for weak generalized localization in the class L_1 for multiple Fourier trigonometric series from the point of view of isometric transformations. (Russian. Russian summary) **2003b:42024**
Borovikov, Vladimir A. (*with* Mendoza, Francisco Javier) The problem of the pointwise Fourier inversion for piecewise smooth functions of several variables. (English summary) **2003h:42021**
Chung, Soon-Yeong (*with* Kim, Dohan) Paley-Wiener type theorems for the temperature transform. (English summary) **2003b:42025**
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Danelia, A. On the property of the conjugate function of many variables. (English and Georgian summaries)
De Bonis, M. C. (*with* Della Vecchia, Biancamaria; Mastroianni, Giuseppe) Approximation of the Hilbert transform on the real line using Hermite zeros. (English summary) **2003e:42019**
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42B15 Multipliers

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Folch-Gabayet, Magali (*with* Wright, James Robert) An estimation for a family of oscillatory integrals. (English summary) **2003m:42029**
Gadzhiev, A. I. Two-weighted inequalities for Riesz potentials, generated by Bessel differential operators. (English and Azerbaijani summaries) **2003m:42030**
Gát, György (*with* Nagy, Karoly) Cesàro summability of the character system of the p-series field in the Kaczmarz rearrangement. (English and Russian summaries) **2003c:42011**
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Duong, Xuan Thinh (*with* Ouhabaz, El Maati; Sikora, Adam) Plancherel-type estimates and sharp spectral multipliers. (English summary) **2003k:43012**
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Feichtinger, Hans G. (*with* Nowak, Krzysztof) A first survey of Gabor multipliers. (English summary)
Girardi, Maria (*with* Weis, Lutz) Operator-valued Fourier multiplier theorems on Besov spaces. (English summary) **2003m:46050**
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Simon, Péter Two-parameter Vilenkin multipliers and a square function. (English summary) **2003m:43006**
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Torrea Hernández, José Luis Some remarks about the Laguerre semigroup. (Spanish. English summary) **2003c:33016**
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Xu, Han (*with* Chen, Jie Cheng; Ying, Yi-ming) A note on Marcinkiewicz integrals with H^1 kernels. (English summary) **2003k:42043**
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Zhu, Yueping Multipliers on weighted function spaces over locally compact Vilenkin groups. (English summary) **2003i:43004**

42B20 Singular integrals (Calderón-Zygmund, etc.)

Al-Qassem, Hussain (*with* Pan, Yibiao) L^p boundedness for singular integrals with rough kernels on product domains. (English summary) **2003h:42025**
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43–XX Abstract harmonic analysis {For other analysis on topological and Lie groups, see 22Exx.}

43–01 Instructional exposition (textbooks, tutorial papers, etc.)

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Lecture Notes in Mathematics *see* **Chu, Cho-Ho**, **2003i:43001**

43–02 Research exposition (monographs, survey articles)

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43A05 Measures on groups and semigroups, etc.

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43A07 Means on groups, semigroups, etc.; amenable groups

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43A15 L^p-spaces and other function spaces on groups, semigroups, etc.

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43A22 Homomorphisms and multipliers of function spaces on groups, semigroups, etc.

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44A99 Miscellaneous topics

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45–XX Integral equations

45–02 Research exposition (monographs, survey articles)

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45–03 Historical (must also be assigned at least one classification number from Section 01)

Rus, Ioan A. Who authored the first integral equations book in the world? (English summary)

45–04 Explicit machine computation and programs (not the theory of computation or programming)

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45–06 Proceedings, conferences, collections, etc.

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(Gohberg, Israel) *see* **Toeplitz matrices and singular integral equations, 2003d:47001**
(Junghanns, Peter) *see* **Toeplitz matrices and singular integral equations, 2003d:47001**
(Silbermann, Bernd) *see* **Toeplitz matrices and singular integral equations, 2003d:47001**

Items listed otherwise than by author

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Silbermann, Bernd ★ Toeplitz matrices and singular integral equations. **2003d:47001**
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45A05 Linear integral equations

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45B05 Fredholm integral equations

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45C05 Eigenvalue problems [see also 34Lxx, 35Pxx, 45P05, 47A75]

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45Exx Singular integral equations [see also 30E20, 30E25, 44A15, 44A35]

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45Fxx Systems of linear integral equations

45F05 Systems of nonsingular linear integral equations

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45F15 Systems of singular linear integral equations

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45Gxx Nonlinear integral equations [see also 47H30, 47Jxx]

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45Mxx Qualitative behavior

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45R05 Random integral equations [see also 60H20]

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— ★ C^*-algebras. Vol. 2. **2003a:46003**
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Schneider, Peter[1] ★ Nonarchimedean functional analysis. (English summary) **2003a:46106**
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46–02 Research exposition (monographs, survey articles)

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46–03 Historical (must also be assigned at least one classification number from Section 01)

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Kawahigashi, Yasuyuki *see* **Izumi, Masaki**
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46–06 Proceedings, conferences, collections, etc.

(Al'beverio, S.) *see* **Operator methods in ordinary and partial differential equations, 2003c:46001**
(Cwikel, Michael) *see* **Function spaces, interpolation theory and related topics, 2003f:46002**
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(Kamińska, Anna) *see* **Trends in Banach spaces and operator theory, 2003m:46004**
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(Araki, Huzihiro) *see* **Dedicated to Professor Huzihiro Araki on the occasion of his 70th birthday**
(Banakh, Taras) *see* **General topology in Banach spaces, 2003a:00015**
(Finet, Catherine) *see* **Henson, C. Ward et al., 2003m:00019**
Henson, C. Ward (*with* Iovino, José; Kechris, Alexander S.; Odell, Edward) ★ Analysis and logic. **2003m:00019**
Iovino, José *see* **Henson, C. Ward et al., 2003m:00019**
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(Michaux, Christian) *see* **Henson, C. Ward et al., 2003m:00019**
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Functional Analysis and its Applications ★ Functional analysis.
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46Axx Topological linear spaces and related structures {For function spaces, see 46Exx.}

46A03 General theory of locally convex spaces

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Bonet, José (*with* Conejero, José A.) Duality for monomorphisms and almost open operators between locally convex spaces. (English summary) **2003i:46001**
Cao, Ding Hua (*with* Zhu, Qi Ding; Li, Dan Hen) Category theorems on (LB) spaces. (Chinese. English and Chinese summaries) **2003c:46003**
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Leiderman, A. (*with* Rubin, Matatyahu) On the reconstruction of locally convex spaces from their groups of homeomorphisms. (English summary) **2003c:46004**
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Orlov, I. V. Normal functional indices and normal duality. (English summary) **2003h:46002**
Qiu, Jing Hui A class of locally convex spaces and its mapping characterization. (Chinese. English and Chinese summaries) **2003j:46004**
Rubin, Matatyahu *see* **Leiderman, A., 2003c:46004**
Sun, Li Min[2] A relation between weak and strong topologies in dual pairs. (English and Chinese summaries) **2003m:46007**
Wu, Jun De (*with* Lu, Shi Jie) A full-invariant theorem and some applications. (English summary) **2003g:46001**
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Yan, Cong Hua A new characterization of L-fuzzy locally convex topological vector spaces and its applications. (English summary) **2003g:46088**
Zhang, Jian Ping *see* **Qiu, Jing Hui et al., 2003f:47004**

46A04 Locally convex Fréchet spaces and (DF)-spaces

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Mehemmed, Ali A. An application of Kwapień's theorem to the investigation of the structure of L_0-space. (English summary) **2003e:46002**
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Bes, Juan (*with* Chan, Kit C.) Denseness of hypercyclic operators on a Fréchet space. (English summary) **2003j:47006**
Bierstedt, Klaus D. (*with* Bonet, José) Biduality in (LF)-spaces. (English and Spanish summaries) **2003d:46002**
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— *see also* **Bierstedt, Klaus D., 2003d:46002**
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Frigon, Marlène (*with* O'Regan, Donal) A Leray-Schauder alternative for Mönch maps on closed subsets of Fréchet spaces. (English summary) **2003j:47071**
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— *see also* **Cascales, B. et al., 2003i:54005**
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Kučera, Jan *see* **Bosch-Giral, Carlos, 2003d:46003**
Naranjo, Francisco *see* **Fernández López, Antonio**[2]**, 2003b:46004**
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Śliwa, Wiesław Closed subspaces without Schauder bases in non-Archimedean Fréchet spaces. (English summary) **2003f:46117**
— On closed subspaces with Schauder bases in non-Archimedean Fréchet spaces. (English summary) **2003e:46122**
Tan, Li Yun *see* **Xiang, Shu Huang, 2003a:47036**

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Vogt, Dietmar *see* **Bonet, José et al., 2003h:46056**
Xiang, Shu Huang (*with* Tan, Li Yun) Some approximation problems of isometric operators in Fréchet spaces. (Chinese. English and Chinese summaries) **2003a:47036**

46A08 Barrelled spaces, bornological spaces

Kadelburg, Zoran (*with* Radenović, Stojan) ★ Subspaces and quotients of topological and ordered vector spaces. **2003m:46008**
Radenović, Stojan *see* **Kadelburg, Zoran, 2003m:46008**
Sánchez Ruiz, L. M. *see* **Saxon, Stephen A., 2003f:46003**
Saxon, Stephen A. (*with* Sánchez Ruiz, L. M.) Three-space weak barrelledness. (English summary) **2003f:46003**

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Bonet, José (*with* Dierolf, S.; Wengenroth, Jochen) Strong duals of projective limits of (LB)-spaces. (English summary) **2003e:46004**
Cao, Ding Hua (*with* Zhu, Qi Ding) A condition of normability for bornologic spaces. (Chinese. English and Chinese summaries)
Dierolf, S. *see* **Bonet, José et al., 2003e:46004**
Ferrando, Juan Carlos (*with* Lyudkovskiĭ, S. V.) Some barrelledness properties of $c_0(\Omega, X)$. (English summary) **2003h:46011**
— On sets of density zero. (English summary) **2003g:28010**
Kąkol, Jerzy (*with* Saxon, Stephen A.) Montel (DF)-spaces, sequential (LM)-spaces and the strongest locally convex topology. (English summary) **2003h:46013**
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López Pellicer, M. (*with* Sánchez Ruiz, L. M.) Some barrelledness questions in vector L^p-spaces. (English summary) **2003c:46050**
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Olaleru, J. O. On weighted spaces without a fundamental sequence of bounded sets. (English summary) **2003f:46055**
Sánchez Ruiz, L. M. *see* **López Pellicer, M., 2003c:46050**
Saxon, Stephen A. *see* **Kąkol, Jerzy, 2003h:46013**
Swartz, Charles Barrelledness of the space of Dobrakov integrable functions. (English summary) **2003b:46050**
Wengenroth, Jochen *see* **Bonet, José et al., 2003e:46004**
Zhu, Qi Ding *see* **Cao, Ding Hua**

46A11 Spaces determined by compactness or summability properties (nuclear spaces, Schwartz spaces, Montel spaces, etc.)

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Isac, George (*with* Bahya, A. O.) Full nuclear cones associated to a normal cone. Application to Pareto efficiency. (English summary) **2003e:90075**
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Korobeĭnik, Yu. F. On the convergence of series in locally convex spaces. (Russian) **2003a:46014**
Marrero, I. A property characterizing Montel Hankel-$K\{M_p\}$ spaces. (English summary) **2003b:46053**
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Oluyemi, Sunday The completion of a metrisable BTB space is its strong bidual. (English summary) **2003e:46003**
Saxon, Stephen A. *see* **Kąkol, Jerzy, 2003h:46013**

46A13 Spaces defined by inductive or projective limits (LB, LF, etc.) [see also 46M40]

Bierstedt, Klaus D. A survey of some results and open problems in weighted inductive limits and projective description for spaces of holomorphic functions. (English summary) **2003f:46004**
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— Retakh's conditions (M_0) and weakly (sequentially) compact regularity. (English and Chinese summaries) **2003h:46004**
Wengenroth, Jochen *see* **Bonet, José et al., 2003e:46004**
Zhang, Jian Ping *see* **Qiu, Jing Hui, 2003h:46003**

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Bierstedt, Klaus D. (*with* Holtmanns, Silke) An operator representation for weighted inductive limits of spaces of vector valued holomorphic functions. (English summary) **2003b:46023**
Bonet, José (*with* Domański, Paweł; Vogt, Dietmar) Interpolation of vector-valued real analytic functions. (English summary) **2003h:46056**
Colojoară, Ion Ultradifferentiable representations. (English summary) **2003b:46048**
Ding, Guanggui On the boundedness of spheres in F^*-spaces. (English summary) **2003h:46006**
Dmitrishin, M. Ī. *see* **Lopushanskiĭ, O. V., 2003f:47028**
Domański, Paweł *see* **Bonet, José et al., 2003h:46056**
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Kąkol, Jerzy (*with* Saxon, Stephen A.) Montel (DF)-spaces, sequential (LM)-spaces and the strongest locally convex topology. (English summary) **2003h:46013**
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Nacir, Chafik *see* **Bensalem, Jawad, 2003f:46067**
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Valdivia, Manuel *see* **Schmets, Jean, 2003d:46032**
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Wengenroth, Jochen A splitting theorem for subspaces and quotients of $\mathscr{D}'$. (English summary) **2003e:46059**

46A16 Not locally convex spaces (metrizable topological linear spaces, locally bounded spaces, quasi-Banach spaces, etc.)

Albiac, F. (*with* Leránoz, C.) Some remarks on the geometry of quasi-Banach spaces. (English summary) **2003j:46005**
Castillo, Jesús M. Fdez. (*with* Moreno Salguero, Yolanda) Kōnig-Witstock quasi-norms on quasi-Banach spaces. **2003h:46005**
Cobzaş, Ştefan Support points and the convexity of sets in topological vector spaces. (English summary) **2003b:46002**
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Ding, Guanggui On the boundedness of spheres in F^*-spaces. (English summary) **2003h:46006**
Jaworowski, Jan (*with* Nguyen To Nhu; Sisson, Paul; Nguyễn Nhụy; Pham Quang Trinh) Rigid spaces and the AR-property. (English summary) **2003b:46003**
Leránoz, C. *see* **Albiac, F., 2003j:46005**
van Mill, Jan *see* **Dijkstra, Jan J., 2003e:46005**
Moreno Salguero, Yolanda *see* **Castillo, Jesús M. Fdez., 2003h:46005**
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Roberts, James W. Every locally bounded space with trivial dual is the quotient of a rigid space. (English summary) **2003a:46009**
Sisson, Paul *see* **Jaworowski, Jan et al., 2003b:46003**
Szarvas, Tibor Uniform $L_p(w)$ spaces. (English summary) **2003a:46010**
Száz, Árpád Preseminorm generating relations and their Minkowski functionals. (English summary) **2003h:46007**
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Items with secondary classifications in 46A16

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Hoffmann, Mark Robert The Banach envelope of Paley-Wiener type spaces. (English summary) **2003i:46025**
Kalton, Nigel J. (*with* Litvak, Alexander) Quotients of finite-dimensional quasi-normed spaces. (English summary) **2003f:46015**
Litvak, Alexander *see* **Kalton, Nigel J., 2003f:46015**
Spakowski, Andrzej On lower semicontinuous multifunctions in quasi-uniform and vector spaces. (English summary) **2003f:54040**
Tararykova, T. V. Inequalities with sharp constants for operators satisfying the conditions of p-convexity or p-concavity type. (*see* **2003f:00023**)
Wengenroth, Jochen Hypercyclic operators on non-locally convex spaces. (English summary) **2003j:47007**

46A17 Bornologies and related structures; Mackey convergence, etc.

Cao, Ding Hua (*with* Zhu, Qi Ding) A condition of normability for bornologic spaces. (Chinese. English and Chinese summaries)
Zhu, Qi Ding *see* **Cao, Ding Hua**

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Almeida, J. (*with* Barreira, Luis) Hausdorff dimension in convex bornological spaces. (English summary) **2003c:46002**
Arikan, H. (*with* Runov, L.; Zakharyuta, V. P.) Holomorphic functional calculus for operators on a locally convex space. (English summary) **2003m:47025**
Barreira, Luis *see* **Almeida, J., 2003c:46002**
Bernardes, Nilson C., Jr. (*with* Pombo, Dinamérico P., Jr.) Polynomially bornological topological vector spaces. (English summary) **2003e:46120**
Bosch-Giral, Carlos (*with* Gilsdorf, T.; Gómez Wulschner, Claudia; Vera Mendoza, Rigoberto) Local completeness of $l_p(E)$, $1 \leq p < \infty$. (English summary) **2003h:46009**
— (*with* García-Martínez, Armando; Gilsdorf, T.) Some hereditary properties of $l_\infty(E)$ from E. (English summary) **2003h:46010**
Español, Luis (*with* Mínguez, M. Carmen) Cuts for l^∞. (Spanish. English summary) **2003c:18002**
— (*with* Lambán Pardo, Laureano A.) On bornologies, locales and toposes of M-sets. (English summary) **2003i:18003**
García-Martínez, Armando *see* **Bosch-Giral, Carlos et al., 2003h:46010**
Gilsdorf, T. *see* **Bosch-Giral, Carlos et al., 2003h:46009** *and* **2003h:46010**
Gómez Wulschner, Claudia *see* **Bosch-Giral, Carlos et al., 2003h:46009**
Lambán Pardo, Laureano A. *see* **Español, Luis, 2003i:18003**
Mínguez, M. Carmen *see* **Español, Luis, 2003c:18002**
Pombo, Dinamérico P., Jr. *see* **Bernardes, Nilson C., Jr., 2003e:46120**
Runov, L. *see* **Arikan, H. et al., 2003m:47025**
Sánchez Ruiz, L. M. *see* **Saxon, Stephen A., 2003f:46003**
Saxon, Stephen A. (*with* Sánchez Ruiz, L. M.) Three-space weak barrelledness. (English summary) **2003f:46003**
Srivastava, G. S. *see* **Abdul-Hussein, Mushtaq Shaker, 2003h:46034**
Vera Mendoza, Rigoberto *see* **Bosch-Giral, Carlos et al., 2003h:46009**
Zakharyuta, V. P. *see* **Arikan, H. et al., 2003m:47025**

46A19 Other "topological" linear spaces (convergence spaces, ranked spaces, spaces with a metric taking values in an ordered structure more general than R, etc.)

Items with secondary classifications in 46A19

Gunawan, Hendra Inner products on n-inner product spaces. (English summary) **2003i:46023**
Kusraev, A. G. (*with* Kutateladze, S. S.) Nonstandard methods and Kantorovich spaces. (*see* **2003f:46001**)
Kutateladze, S. S. *see* **Kusraev, A. G., (2003f:46001)**
Šimko, Juraj Linear and $\mathbb{R}$-linear betweenness spaces. (English summary) **2003a:03050**

46A20 Duality theory

Garibay Bonales, Fernando (*with* Trigos-Arrieta, F. Javier; Vera Mendoza, Rigoberto) A characterization of Pontryagin-van Kampen duality for locally convex spaces. (English summary) **2003c:46006**
Orlov, I. V. Mackey-Ahrens theorem for spatial scales. (English summary) [Mackey-Arens theorem for spatial scales] **2003a:46011**
Trigos-Arrieta, F. Javier *see* **Garibay Bonales, Fernando et al., 2003c:46006**
Vera Mendoza, Rigoberto *see* **Garibay Bonales, Fernando et al., 2003c:46006**

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Banakh, Taras On topological classification of normed spaces endowed with the weak topology or the topology of compact convergence. (English summary) **2003f:46020**
Bonet, José (*with* Dierolf, S.; Wengenroth, Jochen) Strong duals of projective limits of (LB)-spaces. (English summary) **2003e:46004**
Boos, Johann (*with* Leiger, Toivo) Dual pairs of sequence spaces. (English summary) **2003a:46017**
Bornemann, Folkmar A. Normen zur Charakterisierung der schwach*-Konvergenz beschränkter Folgen. (German summary) [Norms for the characterization of weak* convergence of bounded sequences] **2003h:46030**
Dierolf, S. *see* **Bonet, José et al., 2003e:46004**
Gök, Ömer The band of nilpotents in the second order dual of an f-algebra. (English summary) **2003j:46006**
Kang, Shin Min *see* **Li, Rong Lu et al., 2003c:46010**
Lee, Yuh-Jia (*with* Shih, Cheng-Yuh) The Riesz representation theorem on infinite dimensional spaces and its applications. (English summary) **2003e:46070**
Leiger, Toivo *see* **Boos, Johann, 2003a:46017**
Li, Longsuo *see* **Li, Rong Lu et al., 2003c:46010**
Li, Rong Lu (*with* Li, Longsuo; Kang, Shin Min) Invariants in duality. (English summary) **2003c:46010**
Orlov, I. V. Normal functional indices and normal duality. (English summary) **2003h:46002**
Ruiz Galán, Manuel (*with* Simons, Stephen) A new minimax theorem and a perturbed James's theorem. (English summary) **2003m:46109**
Sánchez Ruiz, L. M. *see* **Saxon, Stephen A., 2003f:46003**
Saxon, Stephen A. (*with* Sánchez Ruiz, L. M.) Three-space weak barrelledness. (English summary) **2003f:46003**
Shih, Cheng-Yuh *see* **Lee, Yuh-Jia, 2003e:46070**
Simons, Stephen *see* **Ruiz Galán, Manuel, 2003m:46109**
Wengenroth, Jochen *see* **Bonet, José et al., 2003e:46004**
Zarnadze, D. On homomorphisms, open operators and their adjoints. (English summary) **2003c:46005**

46A22 Theorems of Hahn-Banach type; extension and lifting of functionals and operators [see also 46M10]

Albius, Edmond (*with* Morillon, Marianne) Uniform smoothness entails Hahn-Banach. (English summary) **2003a:46012**
Morillon, Marianne *see* **Albius, Edmond, 2003a:46012**
Nörtemann, Stefan The Hahn-Banach theorem for partially ordered totally convex, positively convex and superconvex modules. (English summary) **2003m:46009**
Roth, Walter Separation properties for locally convex cones. (English summary) **2003d:46005**
Saccoman, John J. On the extension of linear operators. (English summary) **2003a:46013**
Zhong, Huai Jie A theorem for generalized extension of operators and some applications. (English summary) **2003m:46010**

Items with secondary classifications in 46A22

Apostolova, L. N. (*with* Marinov, Marin Stefanov; Petrov, K. P.) Theorems for extension on manifolds with almost complex structures. (English summary) **2003e:53033**
Frank, Michael On Hahn-Banach type theorems for Hilbert C^*-modules. (English summary) **2003f:46093**
Kindler, Jürgen Separation theorems for abstract convex structures. (English summary) **2003e:52001**
Marinov, Marin Stefanov *see* **Apostolova, L. N. et al., 2003e:53033**
Mohebi, H. (*with* Rezapour, Sh.) On weak compactness of the set of extensions of a continuous linear functional. (English summary) **2003g:46013**
Olteanu, Octav Consequences of a general extension theorem for linear operators and the moment problem. (English summary) **2003f:47027**
Orlov, I. V. A finite increment formula for mappings into inductive scales of spaces. (Russian. English, Russian and Ukrainian summaries) **2003d:46004**
Pallaschke, D. (*with* Urbański, R.) On the separation and order law of cancellation for bounded sets. (English summary) **2003k:49040**
Petrov, K. P. *see* **Apostolova, L. N. et al., 2003e:53033**
Rezapour, Sh. *see* **Mohebi, H., 2003g:46013**
Reznichenko, E. A. (*with* Shkarin, S. A.) On linear extension operators. (English summary) **2003k:54010**
Shkarin, S. A. *see* **Reznichenko, E. A., 2003k:54010**
Sołtysiak, A. The strong spectral extension property does not imply the multiplicative Hahn-Banach property. (English summary) **2003m:46078**
Tabor, Jacek (*with* Yost, David Thomas) Applications of inverse limits to extensions of operators and approximation of Lipschitz functions. (English summary) **2003j:41032**
Tix, Regina Some results on Hahn-Banach-type theorems for continuous d-cones. (English summary) **2003e:68080**
Urbański, R. *see* **Pallaschke, D., 2003k:49040**
Yost, David Thomas *see* **Tabor, Jacek, 2003j:41032**

46A25 Reflexivity and semi-reflexivity [see also 46B10]

Items with secondary classifications in 46A25

Vahabov, N. G. The localization of spectrum and its application. I. (English and Azerbaijani summaries) **2003g:47009**

46A30 Open mapping and closed graph theorems; completeness (including B-, B_r-completeness)

Items with secondary classifications in 46A30

Brattka, Vasco Computable versions of Baire's category theorem. (English summary) **2003d:03101**
Bridges, Douglas S. (*with* Ishihara, Hajime) Constructive closed range and open mapping theorems. (English summary) **2003d:03102**
Ishihara, Hajime *see* **Bridges, Douglas S., 2003d:03102**
Oluyemi, Sunday The completion of a metrisable BTB space is its strong bidual. (English summary) **2003e:46003**

46A32 Spaces of linear operators; topological tensor products; approximation properties [see also 46B28, 46M05, 47L05, 47L20]

Alimohammady, Mohsen Weak*-norm sequentially continuous operators. (English summary) **2003c:46007**
Castañeda, G. (*with* López Molina, J. A.; Rivera Ortún, María José) New tensor norms and operator ideals associated to interpolation spaces between sequence spaces. (English summary) **2003f:46005**
López Molina, J. A. *see* **Castañeda, G. et al., 2003f:46005**
Plichko, Anatoliĭ (*with* Zagorodnyuk, A. V.) Isotropic mappings and automatic continuity of polynomials, analytic and convex operators. (English summary) **2003d:46006**
Rivera Ortún, María José *see* **Castañeda, G. et al., 2003f:46005**
Tiţa, Nicolae A generalization of the approximation spaces. (English summary) **2003e:46006**
Zagorodnyuk, A. V. *see* **Plichko, Anatoliĭ, 2003d:46006**

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Aqzzouz, Belmesnaoui The ε_C-product of a Schwartz b-space by a quotient Banach space and applications. (English summary) **2003m:46106**
Archoun, M. (*with* Ouakkasse, N.; Raïssouli, Mustapha) Décomposition en produit tensoriel inductif de quelques espaces fonctionnels. (English summary) [Inductive tensor product decomposition of some functional spaces] **2003e:46032**
Bes, Juan (*with* Chan, Kit C.) Denseness of hypercyclic operators on a Fréchet space. (English summary) **2003j:47006**
Boyd, Christopher (*with* Dineen, Seán; Rueda, Maria Pilar) Weakly uniformly continuous holomorphic functions and the approximation property. (English summary) **2003g:46049**
Chan, Kit C. *see* **Bes, Juan, 2003j:47006**
Concordido, Cláudia F. R. (*with* Pombo, Dinamérico P., Jr.) Polynomials and multilinear mappings in topological modules. (English summary) **2003d:46057**

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46A35 Summability and bases [see also 46B15]

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46A45 Sequence spaces (including Köthe sequence spaces) [see also 46B45]

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46A50 Compactness in topological linear spaces; angelic spaces, etc.

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46A55 Convex sets in topological linear spaces; Choquet theory [see also 52A07]

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46A63 Topological invariants ((DN), (Ω), etc.)

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46A70 Saks spaces and their duals (strict topologies, mixed topologies, two-norm spaces, co-Saks spaces, etc.)

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46A80 Modular spaces

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46B03 Isomorphic theory (including renorming) of Banach spaces

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46B04 Isometric theory of Banach spaces

Figiel, Tadeusz (*with* Šemrl, Peter; Väisälä, Jussi) Isometries of normed spaces. (English summary) **2003b:46007**
Hagler, J. Complemented isometric copies of L_1 in dual Banach spaces. (English summary) **2003g:46005**
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46B07 Local theory of Banach spaces

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46B08 Ultraproduct techniques in Banach space theory [see also 46M07]

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46B09 Probabilistic methods in Banach space theory [see also 60Bxx]

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46B10 Duality and reflexivity [see also 46A25]

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46B15 Summability and bases [see also 46A35]

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46B26 Nonseparable Banach spaces

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Stegall, Charles *see* **Matoušková, Eva, 2003e:46029**
Valdivia, Manuel Weak-star compact subsets in the bidual of a Banach space. (English summary) **2003a:46036**
Zizler, Václav *see* **Fabian, Marián J. et al., 2003g:46019**

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Almira, Jose María (*with* Luther, U.) Compactness and generalized approximation spaces. (English summary) **2003d:41033**
Banaś, Józef (*with* Sadarangani, Kishin B.) Compactness conditions and strong subdifferentiability of a norm in geometry of Banach spaces. **2003m:46015**
Chandler-Wilde, Simon N. (*with* Zhang, Bo[1]) A generalized collectively compact operator theory with an application to integral equations on unbounded domains. (English summary) **2003f:47022**
Dörfler, Monika (*with* Feichtinger, Hans G.; Gröchenig, Karlheinz) Compactness criteria in function spaces. (English summary) **2003j:46041**
Fabian, Marián J. (*with* Montesinos Santalucía, Vicente; Zizler, Václav) Weakly compact sets and smooth norms in Banach spaces. (English summary) **2003f:46021**
Falcon, Sergio (*with* Sadarangani, Kishin B.) Set quantities and Tauberian operators. (English summary) **2003d:47024**
Feichtinger, Hans G. *see* **Dörfler, Monika et al., 2003j:46041**
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Kalenda, Ondřej F. K. Valdivia compacta and biduals of Asplund spaces. (English summary) **2003d:46020**
Karn, Anil K. *see* **Sinha, Deba P., 2003g:46016**
Luther, U. *see* **Almira, Jose María, 2003d:41033**
Montesinos Santalucía, Vicente *see* **Fabian, Marián J. et al., 2003f:46021**
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Wang, Jincai Sequentially compact sets in a class of generalized Orlicz spaces. (English summary) **2003e:46042**
Zhang, Bo[1] *see* **Chandler-Wilde, Simon N., 2003f:47022**
Zizler, Václav *see* **Fabian, Marián J. et al., 2003f:46021**

46B70 Interpolation between normed linear spaces [see also 46M35]

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Baghdasarian, A. On one approach to the intersection problem of Peetre. (English and Georgian summaries) **2003d:46100**
Defant, Andreas (*with* Mastyło, Mieczysław; Michels, Carsten) Applications of summing inclusion maps to interpolation of operators. (English summary) **2003m:46108**
Dmitrishin, M. Ī. Interpolation of spaces of ultrasmooth vectors of closed operators. (Ukrainian. English, Russian and Ukrainian summaries) **2003j:46115**
Folch-Gabayet, Magali (*with* Wright, James Robert) An estimation for a family of oscillatory integrals. (English summary) **2003m:42029**

Kaijser, Sten (*with* Sigstam, Kibret Negussie) A pseudo-metric structure on interpolation functors. (English summary) **2003a:46103**
Kamińska, Anna (*with* Maligranda, Lech; Persson, Lars Erik) Indices, convexity and concavity of Calderón-Lozanovskiĭ spaces. (English summary) **2003m:46041**
Maligranda, Lech *see* **Kamińska, Anna et al., 2003m:46041**
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Michels, Carsten *see* **Defant, Andreas et al., 2003m:46108**
Persson, Lars Erik *see* **Kamińska, Anna et al., 2003m:46041**
Sigstam, Kibret Negussie *see* **Kaijser, Sten, 2003a:46103**
Stan, Ilie Minimal and maximal description for the real interpolation methods in the case of quasi-Banach triples. (English summary) **2003k:46108**
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46B99 None of the above, but in this section

Abdullaev, A. R. Steady properties of elements in Banach spaces. (English and Georgian summaries) **2003h:46029**
Becerra Guerrero, Julio (*with* Rodríguez Palacios, Ángel; Wood, Geoffrey V.) Banach spaces whose algebras of operators are unitary: a holomorphic approach. (English summary) **2003j:46026**
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Bornemann, Folkmar A. Normen zur Charakterisierung der schwach*-Konvergenz beschränkter Folgen. (German summary) [Norms for the characterization of weak* convergence of bounded sequences] **2003b:46030**
Casevitz, Pierre The complexity of subdifferentiation and its inverse on convex functions in Banach spaces. (English summary) **2003k:46024**
Chen, Ten Ging On a generalization of 2-normed linear space. (English summary) **2003d:46028**
Kalton, Nigel J. A remark on quasi-isometries. (English summary) **2003k:46025**
Lal, Shiva Narain (*with* Bhattacharya, S.; Reddi, E. Keshava) Convergence of Cauchy sequences in 2-normed spaces. (English summary) **2003g:46020**
Oertel, Frank Extension of finite rank operators and operator ideals with the property (I). (English summary) **2003h:46031**
— On normed products of operator ideals which contain $\mathfrak{L}_2$ as a factor. (English summary) **2003m:46032**
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Rodríguez Palacios, Ángel *see* **Becerra Guerrero, Julio et al., 2003j:46026**
Stouti, Abdelkader Fix-finite approximation property in normed vector spaces. **2003g:46021**
Wood, Geoffrey V. *see* **Becerra Guerrero, Julio et al., 2003j:46026**

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Azagra, Daniel (*with* Ferrera Cuesta, Juan) Every closed convex set is the set of minimizers of some C^∞-smooth convex function. (English summary) **2003d:49009**
Brattka, Vasco Computable versions of Baire's category theorem. (English summary) **2003d:03101**
Bridges, Douglas S. (*with* Dudley Ward, Nicholas F.) Kernels of seminorms in constructive analysis. (English summary) **2003f:03077**
Burachik, Regina Sandra (*with* Svaiter, B. F.) Maximal monotone operators, convex functions and a special family of enlargements. (English summary) **2003k:90085**
Buşe, Constantin (*with* Dragomir, Sever Silvestru; Roumeliotis, John; Sofo, Anthony) Generalised trapezoid type inequalities for vector-valued functions and applications. (English summary) **2003d:26025**
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Cho, Kyugeun Averaging property in Banach spaces. (English summary) **2003j:46011**
Dilworth, S. J. (*with* Howard, Ralph; Roberts, James W.) Extremal approximately convex functions and the best constants in a theorem of Hyers and Ulam. (English summary) **2003m:26017**
Dimant, Verónica Strongly p-summing multilinear operators. (English summary) **2003m:47031**
Dodds, P. G. (*with* Semenov, E. M.; Sukochev, F. A.; Franchetti, Carlo) The Banach-Saks property for function spaces. (Russian) **2003g:46030**
Dragomir, Sever Silvestru An inequality improving the first Hermite-Hadamard inequality for convex functions defined on linear spaces and applications for semi-inner products. (English summary) **2003f:26032**
— *see also* **Buşe, Constantin et al., 2003d:26025**
Dudley Ward, Nicholas F. *see* **Bridges, Douglas S., 2003f:03077**
Ferrera Cuesta, Juan *see* **Azagra, Daniel, 2003d:49009**
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Friedman, Theresa L. Relating strictly singular operators to the condition $X < Y$ mod $(\mathscr{S}, \mathscr{T})$ and resulting perturbations. (English summary) **2003m:47003**
García Raffi, L. M. (*with* Romaguera, Salvador; Sánchez Pérez, Enrique A.) The bicompletion of an asymmetric normed linear space. (English summary) **2003m:46012**
Gasparis, Ioannis Strictly singular non-compact operators on hereditarily indecomposable Banach spaces. (English summary) **2003j:46009**
Goebel, Kazimierz Metric environment of the topological fixed point theorems. **2003e:47096**
Gunawan, Hendra Inner products on n-inner product spaces. (English summary) **2003i:46023**
Gutev, Valentin (*with* Ohta, Haruto; Yamazaki, Kaori) Selections and sandwich-like properties via semi-continuous Banach-valued functions. (English summary) **2003m:54024**
Gutman, A. E. (*with* Ryabko, D. B.) The nonstandard hull of a normed space in a Boolean-valued universe [Translation of Mat. Tr. **4** (2001), no. 2, 42–52; MR 2002h:46126]. (English summary)
Haydon, R. G. Boolean rings that are Baire spaces. (English summary) **2003e:46031**
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Howard, Ralph *see* **Dilworth, S. J. et al., 2003m:26017**
Jayne, John E. (*with* Rogers, C. Ambrose) ★ Selectors. (English summary) **2003j:54018**
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Lafuerza-Guillén, B. $\mathscr{D}$-bounded sets in probabilistic normed spaces and in their products. (English and Italian summaries) **2003k:46110**
Li, Chi-Kwong (*with* Schneider, Hans) Orthogonality of matrices. (English summary) **2003c:15036**
Lindenstrauss, Joram (*with* Preiss, David) On Fréchet differentiability of Lipschitz maps between Banach spaces. (English summary) **2003k:46058**
Malčeski, Risto An n-semi-inner product of characteristic p. (Macedonian. English and Macedonian summaries) **2003a:46040**
Martinón, Antonio (*with* Sadarangani, Kishin B.) Ideals of operators and ideals of sets in Banach spaces. (Spanish. English summary) **2003b:47108**
Mitani, Ken-ichi (*with* Saito, Kichi-Suke; Suzuki, Tomonari) Differentiability of absolute norm on $\mathbb{C}^n$. (Japanese) (*see* **2003a:00030**)
Moors, Warren B. (*with* Somasundaram, Sivajah) A weakly Stegall space that is not a Stegall space. (English summary) **2003h:54021**
Navarro, M. A. A note on extreme operators on finite-dimensional Banach spaces. (Spanish. Spanish summary) (*see* **2003a:00034**)
Nörtemann, Stefan The Hahn-Banach theorem for partially ordered totally convex, positively convex and superconvex modules. (English summary) **2003m:46009**
Ohta, Haruto *see* **Gutev, Valentin et al., 2003m:54024**
Oja, Eve Fields Medal for the theory of Banach spaces. (Estonian) (*see* **2003a:00013**)
Pestov, Vladimir Ramsey-Milman phenomenon, Urysohn metric spaces, and extremely amenable groups. (English summary) **2003f:43001**
Preiss, David *see* **Lindenstrauss, Joram, 2003k:46058**
Rassias, Themistocles M. Isometric mappings and the problem of A. D. Aleksandrov for conservative distances. (English summary) **2003c:54057**
Roberts, James W. *see* **Dilworth, S. J. et al., 2003m:26017**
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Rojas-Medar, Marko Antonio *see* **Román-Flores, Heriberto, 2003i:46086**
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Roumeliotis, John *see* **Buşe, Constantin et al., 2003d:26025**
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Sadarangani, Kishin B. *see* **Martinón, Antonio, 2003b:47108**
Saito, Kichi-Suke *see* **Mitani, Ken-ichi et al., (2003a:00030)**
Sánchez Pérez, Enrique A. *see* **García Raffi, L. M. et al., 2003m:46012**
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Semenov, E. M. *see* **Dodds, P. G. et al., 2003g:46030**
Shtern, A. I. Criteria for weak and strong continuity of representations of topological groups in Banach spaces. (Russian. Russian summary) **2003i:22003**
Sofo, Anthony *see* **Buşe, Constantin et al., 2003d:26025**
Somasundaram, Sivajah *see* **Moors, Warren B., 2003h:54021**
Song, Fumin *see* **Sun, Jing Xian, 2003g:54072**
Sukochev, F. A. *see* **Dodds, P. G. et al., 2003g:46030**
Sun, Jing Xian (*with* Song, Fumin) A property of connected components and its applications. (English summary) **2003g:54072**
Suzuki, Tomonari *see* **Mitani, Ken-ichi et al., (2003a:00030)**
Svaiter, B. F. *see* **Burachik, Regina Sandra, 2003k:90085**
Vahabov, N. G. The localization of spectrum and its application. I. (English and Azerbaijani summaries) **2003g:47009**
Villanueva Díez, Ignacio Integral mappings between Banach spaces. (English summary) **2003m:47118**
Vladimirescu, Cristian (*with* Vladimirescu, Simona) On separability and metrisability of weak topologies. (English summary)
Vladimirescu, Simona *see* **Vladimirescu, Cristian**
Wu, Jian Rong[2] An embedding theorem for fuzzy numbers on Banach spaces and its applications. (English summary) **2003c:46088**
Yamazaki, Kaori *see* **Gutev, Valentin et al., 2003m:54024**
Zarnadze, D. On spline algorithms and best approximations in finite codimensional subspaces.

46Cxx Inner product spaces and their generalizations, Hilbert spaces {For function spaces, see 46Exx.}

46C05 Hilbert and pre-Hilbert spaces: geometry and topology (including spaces with semidefinite inner product)

Ding, Guanggui The 1-Lipschitz mapping between the unit spheres of two Hilbert spaces can be extended to a real linear isometry of the whole space. (English summary) **2003d:46029**
Duan, Huo Yuan A characterization of the orthogonal decomposition of Hilbert spaces and its application. (Chinese. English and Chinese summaries) **2003i:46021**
Dvurečenskij, Anatolij A new algebraic criterion for completeness of inner product spaces. (English summary) **2003a:46037**
Kashin, B. S. (*with* Kulikova, T. Yu.) A remark on the approximation properties of frames of general form. (Russian) **2003m:46033**
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Kulikova, T. Yu. *see* **Kashin, B. S., 2003m:46033** *and* **2003m:46034**

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Balashov, M. V. An analogue of the Kreĭn-Milman theorem for a strongly convex hull in a Hilbert space. (Russian. Russian summary) **2003a:46021**

Bercovici, Hari (*with* Kostov, Stoyko) Perturbation of orthonormal bases with an application to diagonalization. (English summary) **2003i:47002**
Cătinaş, Daniela On a possible determination of the frame bounds. (English summary) **2003j:65142**
Christensen, Ole ★ An introduction to frames and Riesz bases. **2003k:42001**
Corach, Gustavo (*with* Maestripieri, Alejandra; Stojanoff, Demetrio) Oblique projections and abstract splines. (English summary) **2003h:41011**
Dragomir, Sever Silvestru A note on Bessel's inequality. **2003d:26027**
Dranishnikov, A. N. (*with* Gong, Guihua; Lafforgue, Vincent; Yu, Guo Liang) Uniform embeddings into Hilbert space and a question of Gromov. (English summary) **2003a:57043**
Faure, Claude-Alain An elementary proof of the fundamental theorem of projective geometry. (English summary) **2003a:51001**
Ganichev, M. (*with* Kadets, Vladimir M.) Filter convergence in Banach spaces and generalized bases. (English summary) **2003f:46019**
García-Cuerva, José (*with* Parcet, Javier) Quantized orthonormal systems: a non-commutative Kwapień theorem. (English summary) **2003m:46089**
Giannopoulos, Apostolos A. (*with* Milman, Vitali D.) Euclidean structure in finite dimensional normed spaces. **2003b:46008**
Gong, Guihua *see* **Dranishnikov, A. N. et al., 2003a:57043**
Holub, James R. Invertibility of operators on Hilbert space defined by frames. (English summary) **2003k:47002**
Jiménez Sevilla, Mar *see* **Azagra, Daniel, 2003k:46056**
Kadets, Vladimir M. *see* **Ganichev, M., 2003f:46019**
Kadison, Richard V. The Pythagorean theorem. I. The finite case. (English summary) **2003e:46108a**
— The Pythagorean theorem. II. The infinite discrete case. (English summary) **2003e:46108b**
Karabyn, O. Nonstandard bases of subspaces in a Hilbert space. (Ukrainian. English, Russian and Ukrainian summaries) **2003k:46012**
— On notion of bases in a Hilbert space. (English and Russian summaries) **2003j:46117**
Kim, Kang-Tae (*with* Krantz, Steven G.) Characterization of the Hilbert ball by its automorphism group. (English summary) **2003a:32033**
Kostov, Stoyko *see* **Bercovici, Hari, 2003i:47002**
Krantz, Steven G. *see* **Kim, Kang-Tae, 2003a:32033**
Kudrik, T. S. *see* **Lyantse, V. È., 2003j:46118**
Lafforgue, Vincent *see* **Dranishnikov, A. N. et al., 2003a:57043**
Li, Feng Wei *see* **Yao, Xi Yan**
Lyantse, V. È. (*with* Kudrik, T. S.) On near-standardness in Hilbert spaces. (Russian. Russian summary) **2003j:46118**
Maestripieri, Alejandra *see* **Corach, Gustavo et al., 2003h:41011**
Milman, Vitali D. *see* **Giannopoulos, Apostolos A., 2003b:46008**
Mirzakhanyan, È. A. Construction of infinite-dimensional relative homotopy groups in a Hilbert space. (Russian) **2003i:55014**
Parcet, Javier *see* **García-Cuerva, José, 2003m:46089**
Saidi, Fathi B. Characterisations of orthogonality in certain Banach spaces. (English summary) **2003a:46026**
— Explicit characterizations of orthogonality in $l_S^p(\mathbf{C})$. (English summary) **2003h:46027**
Saitoh, Saburou Inverses of a family of bounded linear operators. (English summary)
Shevchik, V. V. Images of orthonormal sequences and flattened subspaces in a Hilbert space. (English summary) **2003c:46020**
Stojanoff, Demetrio *see* **Corach, Gustavo et al., 2003h:41011**
Terekhin, P. A. Riesz bases generated by contractions and translations of a function on an interval. (Russian. Russian summary) **2003k:42056**
Väisälä, Jussi A survey of nearisometries. **2003g:46017**
Xin, Jie (*with* Zhou, Jia Yun) Perturbation and stability of frames and atomic decompositions for Banach spaces. (Chinese. English and Chinese summaries) **2003k:46014**
Yao, Xi Yan (*with* Li, Feng Wei) Some characterizations of Bessel sets and generalized frames. (Chinese. English and Chinese summaries)
— (*with* Zhang, Jing Jie) Equivalence relations between generalized frames. (Chinese. English and Chinese summaries) **2003d:46015**
Yu, Guo Liang *see* **Dranishnikov, A. N. et al., 2003a:57043**
Zhang, Jing Jie *see* **Yao, Xi Yan, 2003d:46015**
Zhang, Ke Wei[1] A bilinear inequality. (English summary) **2003f:47033**
Zhou, Jia Yun *see* **Xin, Jie, 2003k:46014**

46C07 Hilbert subspaces (= operator ranges); complementation (Aronszajn, de Branges, etc.) [see also 46B70, 46M35]

Items with secondary classifications in 46C07

Buechler, Steven (*with* Lessmann, Olivier) Simple homogeneous models. **2003i:03036**
Corach, Gustavo (*with* Maestripieri, Alejandra; Stojanoff, Demetrio) Generalized orthogonal projections and shorted operators. (English summary) **2003a:47043**
Lessmann, Olivier *see* **Buechler, Steven, 2003i:03036**
Maestripieri, Alejandra *see* **Corach, Gustavo et al., 2003a:47043**
Stojanoff, Demetrio *see* **Corach, Gustavo et al., 2003a:47043**

46C15 Characterizations of Hilbert spaces

Becerra Guerrero, Julio (*with* Rodríguez Palacios, Ángel) Transitivity of the norm on Banach spaces. **2003i:46022**
Benítez, Carlos (*with* Fernández García-Hierro, Manuel; Soriano, María L.) Location of the Fermat-Torricelli medians of three points. (English summary) **2003h:46032**
Fernández García-Hierro, Manuel *see* **Benítez, Carlos et al., 2003h:46032**
Navarro, M. A. A note on extreme operators on finite-dimensional Banach spaces. (Spanish. Spanish summary) (*see* **2003a:00034**)
Randrianantoanina, Beata A note on the Banach-Mazur problem. (English summary) **2003a:46038**
Rodríguez Palacios, Ángel *see* **Becerra Guerrero, Julio, 2003i:46022**
Soriano, María L. *see* **Benítez, Carlos et al., 2003h:46032**

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Fonf, V. P. (*with* Plichko, Anatoliĭ; Shevchik, V. V.) On a functional-analysis approach to orthogonal sequences problems. (English and Spanish summaries) **2003b:46011**
Gunawan, Hendra A generalization of Bessel's inequality and Parseval's identity. (English summary) **2003h:42008**
Plichko, Anatoliĭ *see* **Fonf, V. P. et al., 2003b:46011**
Shevchik, V. V. *see* **Fonf, V. P. et al., 2003b:46011**

46C20 Spaces with indefinite inner product (Kreĭn spaces, Pontryagin spaces, etc.) [see also 47B50]

Hofmann, Gerald On self-polar Hilbertian norms on (indefinite) inner product spaces. (English summary) **2003d:46030**
— On inner characterizations of pseudo-Kreĭn and pre-Kreĭn spaces. (English summary) **2003e:46030**

Items with secondary classifications in 46C20

Alpay, Daniel (*with* Vinnikov, Victor) Finite dimensional de Branges spaces on Riemann surfaces. (English summary) **2003f:47038**
Azizov, Tomas Ya. (*with* Dijksma, Aad; Gridneva, Irina V.) On the boundedness of Hamiltonian operators. (English summary) **2003g:47069**
Bagchi, Bijan Kumar (*with* Quesne, Christianne) Pseudo-Hermiticity, weak pseudo-Hermiticity and η-orthogonality condition. (English summary) **2003g:81064**
Constantinescu, Tiberiu (*with* Gheondea, Aurelian) Representations of Hermitian kernels by means of Krein spaces. II. Invariant kernels. (English summary) **2003b:47032**
Dijksma, Aad *see* **Azizov, Tomas Ya. et al., 2003g:47069**
Gheondea, Aurelian *see* **Constantinescu, Tiberiu, 2003b:47032**
Gridneva, Irina V. *see* **Azizov, Tomas Ya. et al., 2003g:47069**
Jonas, Peter[1] (*with* Trunk, Carsten) On a class of analytic operator functions and their linearizations. (English summary) **2003h:47070**
Molnár, Lajos Orthogonality preserving transformations on indefinite inner product spaces: generalization of Uhlhorn's version of Wigner's theorem. (English summary) **2003h:47069**
Mostafazadeh, Ali Erratum: "Pseudo-Hermiticity for a class of nondiagonalizable Hamiltonians" [J. Math. Phys. **43** (2002), no. 12, 6343–6352; MR 2003k:81054a]. **2003k:81054b**
Osilenker, Boris P. Symmetric Legendre-Sobolev polynomials in Pontryagin-Sobolev spaces. (Russian. English, Russian and Ukrainian summaries) **2003g:46036**
Quesne, Christianne *see* **Bagchi, Bijan Kumar, 2003g:81064**
Rema, P. S. (*with* Sribala, S.; Vijayarangan, N.) Krein H^*-triple systems. (English summary) **2003j:46077**
Schmidt, Andreas U. Infinite infrared regularization and a state space for the Heisenberg algebra. (English summary) **2003b:81114a**
— Erratum: "Infinite infrared regularization and a state space for the Heisenberg algebra". **2003b:81114b**
Sribala, S. *see* **Rema, P. S. et al., 2003j:46077**
Trunk, Carsten *see* **Jonas, Peter**[1], **2003h:47070**
Vijayarangan, N. *see* **Rema, P. S. et al., 2003j:46077**
Vinnikov, Victor *see* **Alpay, Daniel, 2003f:47038**
Znojil, Miloslav Should $\mathcal{PT}$ symmetric quantum mechanics be interpreted as nonlinear? (English summary) **2003h:81057**

46C50 Generalizations of inner products (semi-inner products, partial inner products, etc.)

Crâşmăreanu, Mircea (*with* Dragomir, Sever Silvestru) $2k$-inner products in real linear spaces. (English summary) **2003h:46033**
Dragomir, Sever Silvestru *see* **Crâşmăreanu, Mircea, 2003h:46033**
Gunawan, Hendra Inner products on n-inner product spaces. (English summary) **2003i:46023**
Miličič, Pavle M. On the g-orthogonal projection and the best approximation of a vector in a quasi-inner product spaces. (English summary) **2003a:46039**

Items with secondary classifications in 46C50

Bakić, Damir (*with* Guljaš, Boris) Hilbert C^*-modules over C^*-algebras of compact operators. (English summary) **2003f:46092**
— (*with* Guljaš, Boris) On a class of module maps of Hilbert C^*-modules. (English summary) **2003k:46084**
Cokilavany, R. *see* **Meenakshi, A. R., 2003f:46118**
Gowda, Huche (*with* Lokesha, V.) On numerical range and spectrum of linear operators on G.S.I.P. spaces. (English summary) **2003m:47009**
— (*with* Lokesha, V.) A note on characterisations of strict convexity. (English summary) **2003i:46010**
— (*with* Lokesha, V.) On spectral properties of operators on Banach spaces. (English summary) **2003g:47005**
— (*with* Lokesha, V.) On normed linear spaces. (English summary) **2003i:46011**
Guljaš, Boris *see* **Bakić, Damir, 2003f:46092** *and* **2003k:46084**
Gunawan, Hendra A generalization of Bessel's inequality and Parseval's identity. (English summary) **2003h:42008**
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46E20 Hilbert spaces of continuous, differentiable or analytic functions

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46E25 Rings and algebras of continuous, differentiable or analytic functions {For Banach function algebras, see 46J10, 46J15.}

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46E27 Spaces of measures [see also 28A33, 46Gxx]

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46E30 Spaces of measurable functions (L^p-spaces, Orlicz spaces, Köthe function spaces, Lorentz spaces, rearrangement invariant spaces, ideal spaces, etc.)

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Chen, Shu Tao (*with* Cui, Yun An; Hudzik, Henryk; Wang, Ting Fu) On some solved and unsolved problems in geometry of certain classes of Banach function spaces. (English summary) **2003e:46034**
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46F12 Integral transforms in distribution spaces [see also 42–XX, 44–XX]

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Bučkovska, A. L. (*with* Pilipović, Stevan S.) An extension of bilinear Hilbert transform to distributions. (English summary) **2003e:46063**
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Karunakaran, V. (*with* Thilaga, V. Baby) A characterization for Laplace-transformable distributions on $\mathbb{R}^2$. (English summary) **2003h:46061**
Loonker, Deshna *see* **Banerji, P. K., 2003d:46053; 2003g:46043; 2003k:46049** *and* **2003m:46070**
Malgonde, S. P. (*with* Gaikawad, G. S.) On a generalized Hankel type convolution of generalized functions. (English summary) **2003h:46062**
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Betancor, Jorge J. (*with* Linares Linares, Manuel; Méndez Pérez, José Manuel) The discrete Tchebycheff transformation in certain spaces of sequences and its applications. (English summary) **2003c:44006**
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— (*with* Betancor Ortiz, Juan D.; Méndez Pérez, José Manuel) Distributional Fourier transform and convolution associated to Chébli-Trimèche hypergroups. (English summary) **2003h:43010**
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46F15 Hyperfunctions, analytic functionals [see also 32A25, 32A45, 32C35, 58J15]

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Eida, Atsuhiko (*with* Pilipović, Stevan S.) Roumieu type tempered ultradistributions and Fourier hyperfunctions. **2003h:46064**
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Morimoto, Mitsuo (*with* Suwa, Masanori) A characterization of analytic functionals on the sphere. II. (English summary) **2003k:46052**
Pilipović, Stevan S. (*with* Stanković, B.) Wiener-type Tauberian theorems for Fourier hyperfunctions. (English summary) **2003k:46053**
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Dhungana, Bishnu P. Eigenfunctions of Laplacian by boundedness conditions in bounded hyperfunctions and distributions. (English summary) **2003m:46065**
Dubinskiĭ, Yuliĭ A. The general form of arbitrary linear functionals on the analytic Sobolev spaces. **2003h:46046**
Eida, Atsuhiko On the microlocal decomposition of ultradistributions and ultradifferentiable functions. (English summary) **2003b:58035**
Heil, Christopher *see* **Ashino, Ryuichi et al.**
Ito, Yoshifumi Theory of (vector-valued) Sato hyperfunctions on a real-analytic manifold. (English summary) **2003a:32006**
Laubin, P. A projective description of the space of holomorphic germs. (English summary) **2003f:46066**
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Vaillancourt, Rémi *see* **Ashino, Ryuichi et al.**

46F20 Distributions and ultradistributions as boundary values of analytic functions [see also 30D40, 30E25, 32A40]

Rechkoski, Vlatko Some notes on the analytic representation of a distribution. (Macedonian. English and Macedonian summaries) **2003k:46054**

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46F25 Distributions on infinite-dimensional spaces [see also 58C35]

Ben Chrouda, Mohamed (*with* Ouerdiane, Habib) Algebras of operators on holomorphic functions and applications. (English summary) **2003g:46044**
Berezanskiĭ, Yuriĭ Makarovich Pascal measure on generalized functions and the corresponding generalized Meixner polynomials. (English summary) **2003b:46059**
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Asai, Nobuhiro On quantum white noises and related transformations.
Benth, Fred Espen (*with* Ng, Siu-Ah) Donsker's delta function and the covariance between generalized functionals. (English summary) **2003f:60120**
Boukas, Andreas *see* **Accardi, Luigi, 2003f:81143**
Chang, Seung Jun (*with* Choi, Jae Gil) Relationships of convolution products, generalized transforms, and the first variation on function spaces. (English summary) **2003f:28032**
Choi, Jae Gil *see* **Chang, Seung Jun, 2003f:28032**
Chung, Dong Myung (*with* Ji, Un Cig; Obata, Nobuaki) Quantum stochastic analysis via white noise operators in weighted Fock space. (English summary) **2003g:60116**
Deck, Thomas (*with* Kruse, Susanne; Potthoff, J.; Watanabe, Hisao) White noise approach to stochastic partial differential equations. (English summary) **2003g:60117**
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Huang, Zhi Yuan (*with* Hu, Xiao Shan; Wang, Xiang Jun^2) Explicit forms of Wick tensor powers in general white noise spaces. (English summary) **2003g:60119**
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Kozitskiĭ, Yu. V. (*with* Oleszczuk, Piotr; Us, G.) Integral operators and dual orthogonal systems on a half-line. (English summary) **2003a:60107**
Kruse, Susanne *see* **Deck, Thomas et al., 2003g:60117**
Kuo, Hui-Hsiung (*with* Obata, Nobuaki; Saitô, Kimiaki) Diagonalization of the Lévy Laplacian and related stable processes. (English summary) **2003h:60105**
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Ouerdiane, Habib (*with* Silva, José Luis) Generalized Feynman-Kac formula with stochastic potential. (English summary) **2003e:60146**
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Saitô, Kimiaki (*with* Tsoi, Allanus H.) Stochastic processes generated by functions of the Lévy Laplacian. (English summary) **2003f:60121**
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Wang, Xiang Jun^2 *see* **Huang, Zhi Yuan et al., 2003g:60119**
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46F30 Generalized functions for nonlinear analysis (Rosinger, Colombeau, nonstandard, etc.)

Damyanov, Blagovest Mikusiński type products of distributions in Colombeau algebra. (English summary) **2003c:46054**
— Further results on Mikusiński type products of the distributions x_+^a in Colombeau algebra. (English summary) **2003g:46045**
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Khrennikov, Andrei *see* **Smolyanov, O. G. et al., 2003i:46040**
Kunzinger, Michael (*with* Steinbauer, Roland) Generalized pseudo-Riemannian geometry. (English summary) **2003g:46046**
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Pilipović, Stevan S. *see* **Đapić, N. et al., 2003f:46063**
Ramadan, Sabra On algebra of new generalized functions $L_\alpha(S_\alpha^a(\mathbf{R}))$. (English and Arabic summaries) **2003e:46065**
Shelkovich, V. M. *see* **Smolyanov, O. G. et al., 2003i:46040**
Smolyanov, O. G. (*with* Khrennikov, Andrei; Shelkovich, V. M.) Multiplicative structures in a linear space of vector-valued distributions. (Russian) **2003i:46040**
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Grosser, Michael (*with* Kunzinger, Michael; Oberguggenberger, Michael; Steinbauer, Roland) ★ Geometric theory of generalized functions with applications to general relativity. (English summary) **2003d:46105**
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Kunzinger, Michael (*with* Steinbauer, Roland) Foundations of a nonlinear distributional geometry. (English summary) **2003e:46125**
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— *see also* **Grosser, Michael et al., 2003a:46108** *and* **2003d:46105**
Ligęza, Jan On a two point boundary value problem for linear differential equations of the fourth order in the Colombeau algebra. (English summary) **2003b:34034**
Nedeljkov, Marko Infinitely narrow soliton solutions to systems of conservation laws. (English summary) **2003c:35113**
Oberguggenberger, Michael *see* **Grosser, Michael et al., 2003d:46105**
Romashevskiĭ, A. B. Weierstrass transformation in algebra of mnemofunctions. **2003f:46061**
— Weierstrass transformation in algebra of mnemofunctions. **2003c:46053**
Shelkovich, V. M. *see* **Khrennikov, Andrei et al., 2003k:46045**
Smolyanov, O. G. *see* **Khrennikov, Andrei et al., 2003k:46045**
Steinbauer, Roland *see* **Grosser, Michael et al., 2003a:46108; 2003d:46105; Heinzle, J. Mark, 2003b:83009** *and* **Kunzinger, Michael, 2003e:46125**
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46F99 None of the above, but in this section

Ito, Yoshifumi Methods of renormalization and distributions. (English summary) **2003a:46063**

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Chung, Soon-Yeong Quasianalyticity of positive definite continuous functions. (English summary) **2003e:42017**
Cohen, Joel M. (*with* Colonna, Flavia) Analytic eigendistributions and applications to homogeneous trees. (English summary) **2003k:31009**
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Khakshournia, S. (*with* Mansouri, Reza) Sign function and gluing of space-time manifolds within the distributional method. (English and Russian summaries) **2003f:83110**
Khrennikov, Andrei ★ Суперанализ. (Russian. Russian summary) [Superanalysis] **2003i:58016**
Lapinova, S. A. *see* **Saichev, A. I., 2003a:76096**
Mansouri, Reza *see* **Khakshournia, S., 2003f:83110**
Radyna, M. Functionals with values in the non-Archimedean field of Laurent series and their applications to the equations of elasticity theory. I. (English and Lithuanian summaries) **2003m:30092**
Saichev, A. I. (*with* Lapinova, S. A.) Supersingular functions and their application in mechanics. (Russian. English and Russian summaries) **2003a:76096**
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46Gxx Measures, integration, derivative, holomorphy (all involving infinite-dimensional spaces) [see also 28–XX, 46Txx]

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Deville, Robert (*with* Ghoussoub, Nassif) Perturbed minimization principles and applications. (English summary) **2003b:49012**
Ghoussoub, Nassif *see* **Deville, Robert, 2003b:49012**

46G05 Derivatives [see also 46T20, 58C20, 58C25]

Accardi, Luigi (*with* Smolyanov, O. G.) Representations of Lévy Laplacians and related semigroups and harmonic functions. (Russian) **2003g:46047**
— (*with* Smolyanov, O. G.) Lévy-Laplace operators in spaces of functions on rigged Hilbert spaces. (Russian) **2003k:46055**
Azagra, Daniel (*with* Jiménez Sevilla, Mar) On the size of the sets of gradients of bump functions and starlike bodies on the Hilbert space. (English summary) **2003k:46056**
Cheng, Li Xin *see* **Teng, Yan Mei, 2003m:46071**
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Gaspari, T. On the range of the derivative of a real-valued function with bounded support. (English summary) **2003k:46057**
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Johnson, William B. (*with* Lindenstrauss, Joram; Preiss, David; Schechtman, Gideon) Almost Fréchet differentiability of Lipschitz mappings between infinite-dimensional Banach spaces. **2003a:46064**

Lindenstrauss, Joram (*with* Preiss, David) On Fréchet differentiability of Lipschitz maps between Banach spaces. (English summary) **2003k:46058**

— *see also* **Johnson, William B. et al., 2003a:46064**

Mordukhovich, Boris S. (*with* Wang, Bingwu) Extensions of generalized differential calculus in Asplund spaces. (English summary) **2003h:46065**

Preiss, David *see* **Johnson, William B. et al., 2003a:46064** *and* **Lindenstrauss, Joram, 2003k:46058**

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Schechtman, Gideon *see* **Johnson, William B. et al., 2003a:46064**

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Teng, Yan Mei (*with* Cheng, Li Xin) Differentiability of Lipschitzian functions on small sets. (Chinese. English and Chinese summaries) **2003m:46071**

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46G12 Measures and integration on abstract linear spaces [see also 28C20, 46T12]

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46G20 Infinite-dimensional holomorphy [see also 32–XX, 46E50, 46T25, 58B12, 58C10]

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46G99 None of the above, but in this section

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46Hxx Topological algebras, normed rings and algebras, Banach algebras {For group algebras, convolution algebras and measure algebras, see 43A10, 43A20.}

46H05 General theory of topological algebras

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Barnes, Bruce A. Fredholm theory in an algebra with respect to a Banach subalgebra. (English summary) **2003e:46074**
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Cao, Huai Xin (*with* Dai, Shi Xun) Some properties of unit-preserving linear mappings between Banach algebras. (Chinese. English and Chinese summaries) **2003a:46069**
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Cahen, Paul-Jean (*with* Chabert, Jean-Luc) On the ultrametric Stone-Weierstrass theorem and Mahler's expansion. (English and French summaries) **2003g:46086**
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46H15 Representations of topological algebras

Cuenca Mira, José Antonio Moufang H^*-algebras. **2003i:46043**
Rodríguez Palacios, Ángel On the size of sets of numbers. (Spanish. Spanish summary) **2003d:46056**

46H20 Structure, classification of topological algebras

Bae, Jae-Hyeong *see* **Park, Kyoo-Hong et al., 2003a:46070**
Dupré, Maurice J. (*with* Glazebrook, James F.) Holomorphic framings for projections in a Banach algebra. (English summary) **2003j:46067**
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Hu, Zhiguo Inductive extreme non-Arens regularity of the Fourier algebra $A(G)$. (English summary) **2003f:46069**
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Zhang, Yong[1] Weak amenability of module extensions of Banach algebras. (English summary) **2003f:46071**

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46H25 Normed modules and Banach modules, topological modules (if not placed in 13–XX or 16–XX)

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Bračič, Janko Representations and derivations of modules. (English summary) **2003f:46070**
Concordido, Cláudia F. R. (*with* Pombo, Dinamérico P., Jr.) Polynomials and multilinear mappings in topological modules. (English summary) **2003d:46057**
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Gök, Ömer On transitive operator algebras in locally convex spaces. (English summary) **2003g:46055**
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Misra, Gadadhar *see* **Douglas, Ronald G. et al., 2003d:46058**
Moslehian, Mohammad Sal On hereditary homological properties of Banach algebras. (English summary) **2003h:46072**
— (*with* Niknam, Assadollah) On contractibility of matrix algebras. (English summary) **2003j:46069**
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Park, Chun-Gil (*with* Shin, Joon-Kook) Generalized Jensen's equations in Banach modules. (English summary) **2003j:46070**
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Robbins, D. A. Modules over commutative C^*-algebras and the BSE condition. (English summary) **2003d:46059**
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— Projectivity in categories of Hilbert modules over function algebras. (English summary) **2003a:46072**
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46H30 Functional calculus in topological algebras [see also 47A60]

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46H40 Automatic continuity

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46H70 Nonassociative topological algebras [see also 46K70, 46L70]

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46Jxx Commutative Banach algebras and commutative topological algebras [see also 46E25]

46J05 General theory of commutative topological algebras

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46J10 Banach algebras of continuous functions, function algebras [see also 46E25]

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46J15 Banach algebras of differentiable or analytic functions, H^p-spaces [see also 30D55, 30H05, 32A35, 32A37, 32A38, 42B30]

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46J25 Representations of commutative topological algebras

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46J30 Subalgebras

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46J40 Structure, classification of commutative topological algebras

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46J45 Radical Banach algebras

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46Kxx Topological (rings and) algebras with an involution [see also 16W10]

46K05 General theory of topological algebras with involution

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46K10 Representations of topological algebras with involution

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46K15 Hilbert algebras

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46K70 Nonassociative topological algebras with an involution [see also 46H70, 46L70]

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46Lxx Selfadjoint operator algebras (C^*-algebras, von Neumann (W^*-) algebras, etc.) [see also 22D25, 47Lxx]

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46L05 General theory of C^*-algebras

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46L85 Noncommutative topology [see also 58B32, 58B34, 58J22]

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46L87 Noncommutative differential geometry [see also 58B32, 58B34, 58J22]

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46L89 Other "noncommutative" mathematics based on C^*-algebra theory [see also 58B32, 58B34, 58J22]

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46L99 None of the above, but in this section

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46Mxx Methods of category theory in functional analysis [see also 18–XX]

46M05 Tensor products [see also 46A32, 46B28, 47A80]

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46M07 Ultraproducts [see also 46B08, 46S20]

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46M18 Homological methods (exact sequences, right inverses, lifting, etc.)

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46M20 Methods of algebraic topology (cohomology, sheaf and bundle theory, etc.) [see also 14F05, 18Fxx, 19Kxx, 32Cxx, 32Lxx, 46L80, 46M15, 46M18, 55Rxx]

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46M99 None of the above, but in this section

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Aubin, Jean-Pierre ★ Applied functional analysis. (English summary) **2003b:46086**
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46N20 Applications to differential and integral equations

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Krall, Allan M. ★ Hilbert space, boundary value problems and orthogonal polynomials. (English summary) **2003f:34162**
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Teixeira, Eduardo V. O. *see* **Moreira, Diego R., 2003m:47116**
Thäter, Gudrun The Neumann problem, cylindrical outlets and Sobolev spaces. (English summary) **2003g:35045**
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Vrabie, Ioan I. Compactness of the solution operator for a linear evolution equation with distributed measures. (English summary) **2003d:47060**
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46N30 Applications in probability theory and statistics

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Benth, Fred Espen On weighted $L^2(\Omega)$-spaces, their duals and Itô integration. (English summary) **2003a:60078**
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Blei, Ron ★ Analysis in integer and fractional dimensions. (English summary) **2003a:46008**
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Dabo-Niang, Sophie Estimation de la densité dans un espace de dimension infinie: application aux diffusions. (English and French summaries) [Density estimation in an infinite-dimensional space: application to diffusion processes] **2003a:62058**
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Kwapień, Stanisław (*with* Tarieladze, V. I.) Mackey continuity of characteristic functionals. (English summary) **2003m:60010**
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46N55 Applications in statistical physics

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46N60 Applications in biology and other sciences

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Doplicher, Sergio (*with* Longo, Roberto; Roberts, John E.; Zsidó, László) A remark on quantum group actions and nuclearity. (English summary) **2003h:46097**
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Roberts, John E. *see* **Doplicher, Sergio et al., 2003h:46097**
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46N99 None of the above, but in this section

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Biglieri, Ezio (*with* Taricco, Giorgio; Tulino, Antonia) Performance of space-time codes for a large number of antennas. (English summary) **2003j:94064**
Bourgain, Jean Λ_p-sets in analysis: results, problems and related aspects. **2003e:43006**
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Ogawa, Hidemitsu *see* **Akira, Hirabayashi**
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Putinar, Mihai Linear analysis of quadrature domains. III. (English summary) **2003e:47036b**
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46Sxx Other (nonclassical) types of functional analysis [see also 47Sxx]

46S10 Functional analysis over fields other than R or C or the quaternions; non-Archimedean functional analysis [see also 12J25, 32P05]

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Schneider, Peter[1] ★ Nonarchimedean functional analysis. (English summary) **2003a:46106**
Śliwa, Wiesław Examples of non-Archimedean nuclear Fréchet spaces without a Schauder basis. (English summary) **2003d:46104**
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— On closed subspaces with Schauder bases in non-Archimedean Fréchet spaces. (English summary) **2003e:46122**
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46S20 Nonstandard functional analysis [see also 03H05]

Gutman, A. E. (*with* Ryabko, D. B.) A completeness criterion for the nonstandard hull of a normed space in a Boolean-valued universe. (Russian)
— (*with* Ryabko, D. B.) The nonstandard hull of a normed space in a Boolean-valued universe [Translation of Mat. Tr. **4** (2001), no. 2, 42–52; MR 2002h:46126]. (English summary)
Karabyn, O. On notion of bases in a Hilbert space. (English and Russian summaries) **2003j:46117**
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Elsken, Thomas A nonstandard description of retarded functional differential equations. (English summary) **2003g:34135**
Emel'yanov, Eduard Yu. Infinitesimals in vector lattices. (English summary) (*see* **2003f:46001**)
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Karabyn, O. Nonstandard bases of subspaces in a Hilbert space. (Ukrainian. English, Russian and Ukrainian summaries) **2003k:46012**
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46Txx Nonlinear functional analysis [see also 47Hxx, 47Jxx, 58Cxx, 58Dxx]

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47Axx General theory of linear operators

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47A12 Numerical range, numerical radius

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47A15 Invariant subspaces

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47A25 Spectral sets

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47A40 Scattering theory [see also 34L25, 35P25, 81Uxx]

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47A46 Chains (nests) of projections or of invariant subspaces, integrals along chains, etc.

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47A48 Operator colligations (= nodes), vessels, linear systems, characteristic functions, realizations, etc.

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47A52 Ill-posed problems, regularization

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47A56 Functions whose values are linear operators (operator and matrix valued functions, etc., including analytic and meromorphic ones)

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47A58 Operator approximation theory

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47A63 Operator inequalities

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47A64 Operator means, shorted operators, etc.

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47A65 Structure theory

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47A66 Quasitriangular and nonquasitriangular, quasidiagonal and nonquasidiagonal operators

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47A70 (Generalized) eigenfunction expansions; rigged Hilbert spaces

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47A75 Eigenvalue problems [see also 49R50]

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47A80 Tensor products of operators [see also 46M05]

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47Bxx Special classes of linear operators

47B06 Riesz operators; eigenvalue distributions; approximation numbers, s-numbers, Kolmogorov numbers, entropy numbers, etc. of operators

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47B10 Operators belonging to operator ideals (nuclear, p-summing, in the Schatten-von Neumann classes, etc.) [see also 47L20]

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47B15 Hermitian and normal operators (spectral measures, functional calculus, etc.)

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47B37 Operators on special spaces (weighted shifts, operators on sequence spaces, etc.)

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47B44 Accretive operators, dissipative operators, etc.

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47B47 Commutators, derivations, elementary operators, etc.

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Chang, Ick-Soon (*with* Jun, Kil-Woung; Jung, Yong-Soo) On derivations in Banach algebras. (English summary) **2003h:16058**
Cui, Jian Lian (*with* Hou, Jin Chuan) Characterizations of nest algebra automorphisms. (Chinese. English and Chinese summaries) **2003i:47081**
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Zhang, Yong[1] Weak amenability of module extensions of Banach algebras. (English summary) **2003f:46071**

47B48 Operators on Banach algebras

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— (*with* Hou, Jin Chuan) Linear maps and additive maps that preserve operators annihilated by a polynomial. (English summary) **2003g:47064**
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Cui, Jian Lian (*with* Hou, Jin Chuan) The spectrally bounded linear maps on operator algebras. (English summary) **2003a:47079**
Hou, Jin Chuan *see* **Cui, Jian Lian, 2003a:47079; Bai, Zhao Fang, 2003g:47064; 2003j:47045** *and* **Hou, Shen Zhao, 2003h:47068**
Hou, Shen Zhao (*with* Hou, Jin Chuan) K-potent preserving linear maps. (English summary) **2003h:47068**
Kalton, Nigel J. *see* **Bermúdez, Teresa, 2003a:47078**
Ke, W.-F. *see* **Chebotar, M. A. et al., 2003m:47066**
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Mathieu, Martin (*with* Schick, Gerhard J.) First results on spectrally bounded operators. (English summary) **2003e:47066**
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Neal, Matthew Spectrum preserving linear maps on JBW*-triples. (English summary) **2003j:47047**
Schick, Gerhard J. *see* **Mathieu, Martin, 2003e:47066**
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Bračič, Janko Unital strongly harmonic commutative Banach algebras. (English summary) **2003e:47064**
Brešar, Matej On automorphisms of Banach algebras. (English summary) **2003a:46068**
Jing, Wu (*with* Lu, Shi Jie; Li, Peng Tong) Characterisations of derivations on some operator algebras. (English summary) **2003f:47059**
Kissin, Edward (*with* Shulman, Viktor S.) Range-inclusive maps on C^*-algebras. (English summary) **2003j:46078**
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Ülger, A. Multipliers with closed range on commutative semisimple Banach algebras. (English summary) **2003k:43004**
Zhang, Jian Hua[4] Jordan isomorphisms of nest algebras. (Chinese. English and Chinese summaries) **2003i:47082**
Zhang, Yong[1] Weak amenability of module extensions of Banach algebras. (English summary) **2003f:46071**

47B49 Transformers (= operators on spaces of operators)

An, Guimei (*with* Hou, Jin Chuan) Characterizations of isomorphisms by multiplicative maps on operator algebras. (English summary) **2003m:47067**
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Hou, Jin Chuan (*with* Cui, Jian Lian) Additive maps on standard operator algebras preserving invertibilities or zero divisors. (English summary) **2003j:47048**
— *see also* **An, Guimei**, **2003m:47067**
Ji, Guo Xing (*with* Du, Hong Ke) Similarity-invariant subspaces and similarity-preserving linear maps. (English summary) **2003g:47065**
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Lu, Fang-yan Multiplicative mappings of operator algebras. (English summary) **2003b:47065**
Molnár, Lajos $*$-semigroup endomorphisms of $B(H)$. (English summary) **2003b:47066**
— Jordan maps on standard operator algebras. (English summary) **2003e:47068**
— Orthogonality preserving transformations on indefinite inner product spaces: generalization of Uhlhorn's version of Wigner's theorem. (English summary) **2003h:47069**
— Conditionally multiplicative maps on the set of all bounded observables preserving compatibility. (English summary) **2003c:47070**
— (*with* Šemrl, Peter) Elementary operators on standard operator algebras. (English summary) **2003g:47067**
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— *see also* **Hou, Jin Chuan**, **2003a:46080**
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47B80 Random operators [see also 60H25]

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47Cxx Individual linear operators as elements of algebraic systems

47C05 Operators in algebras

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47C10 Operators in *-algebras

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47C15 Operators in C^*- or von Neumann algebras

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47C99 None of the above, but in this section

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47Dxx Groups and semigroups of linear operators, their generalizations and applications

47D03 Groups and semigroups of linear operators {For nonlinear operators, see 47H20; see also 20M20.}

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47D08 Schrödinger and Feynman-Kac semigroups

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47D09 Operator sine and cosine functions and higher-order Cauchy problems [see also 34G10]

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47D99 None of the above, but in this section

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47E05 Ordinary differential operators [see also 34Bxx, 34Lxx]

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47H04 Set-valued operators [see also 28B20, 54C60, 58C06]

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47H06 Accretive operators, dissipative operators, etc.

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47J06 Nonlinear ill-posed problems

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47Lxx Linear spaces and algebras of operators [see also 46Lxx]

47L05 Linear spaces of operators [see also 46A32 and 46B28]

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47L10 Algebras of operators on Banach spaces and other topological linear spaces

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47L15 Operator algebras with symbol structure

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47L25 Operator spaces (= matricially normed spaces) [see also 46L07]

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47L30 Abstract operator algebras on Hilbert spaces

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47L35 Nest algebras, CSL algebras

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47L40 Limit algebras, subalgebras of C^*-algebras

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47L45 Dual algebras; weakly closed singly generated operator algebras

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47L50 Dual spaces of operator algebras

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47L55 Representations of (nonselfadjoint) operator algebras

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47L60 Algebras of unbounded operators; partial algebras of operators

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47L65 Crossed product algebras (analytic crossed products)

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47L70 Nonassociative nonselfadjoint operator algebras

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47L75 Other nonselfadjoint operator algebras

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47L80 Algebras of specific types of operators (Toeplitz, integral, pseudodifferential, etc.)

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47N60 Applications in biology and other sciences

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47N99 None of the above, but in this section

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47Sxx Other (nonclassical) types of operator theory [see also 46Sxx]

47S10 Operator theory over fields other than R, C or the quaternions; non-Archimedean operator theory

De Grande-De Kimpe, N. (*with* Pérez-García, Cristina) The extension of p-adic compact operators. (English summary) **2003e:47125**
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47S20 Nonstandard operator theory [see also 03H05]

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47S30 Constructive operator theory [see also 03F60]

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— *see also* **Richman, Fred et al., 2003g:47131**
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47S40 Fuzzy operator theory [see also 03E72]

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Fang, Jin-Xuan On nonlinear equations for fuzzy mappings in probabilistic normed spaces. (English summary) **2003i:47085**
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47S50 Operator theory in probabilistic metric linear spaces

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Beg, Ismat (*with* Gal, Sorin G.) On the probabilistic domain invariance. (English summary) **2003c:47091**
Chugh, Renu (*with* Kumar, Sanjay; Kumar Vats, Ramesh) A generalization of Banach contraction principle in probabilistic D-metric spaces. I. (English summary) **2003m:47104**
Gal, Sorin G. *see* **Beg, Ismat, 2003c:47091**
Guo, Tie-xin Survey of recent developments of random metric theory and its applications in China. II. (English and Chinese summaries) **2003e:46123**

Hadžić, Olga (*with* Pap, Endre) ★ Fixed point theory in probabilistic metric spaces. (English summary) **2003a:47113**

Huang, Xiao Qin (*with* Zhu, Chuan Xi) Existence and uniqueness of solutions for set-valued nonlinear operator equations in Menger probabilistic normed spaces. (Chinese. English and Chinese summaries)

Kumar, Sanjay *see* **Chugh, Renu et al., 2003m:47104**

Kumar Vats, Ramesh *see* **Chugh, Renu et al., 2003m:47104**

Miheţ, Dorel A fixed point theorem for Hicks-type contractions in probabilistic metric spaces. (English summary)

Pap, Endre *see* **Hadžić, Olga, 2003a:47113**

Radu, Viorel Triangular norms and Menger spaces with the fixed point property for probabilistic contractions. (English summary) **2003a:54033**

– Classes of Menger spaces with the fixed point property for probabilistic contractions. (English summary)

Zhu, Chuan Xi Solution of a nonlinear operator equation in the Menger PN space. (Chinese. English and Chinese summaries)

– *see also* **Huang, Xiao Qin**

49–XX Calculus of variations and optimal control; optimization [see also 34H05, 34K35, 65Kxx, 90Cxx, 93–XX]

49–00 General reference works (handbooks, dictionaries, bibliographies, etc.)

Items with secondary classifications in 49–00

(Pardalos, Panos M.) *see* **Handbook: Global optimization, 2003b:90001**
(Romeijn, H. Edwin) *see* **Handbook: Global optimization, 2003b:90001**

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Handbook:
Global optimization ★ Handbook of global optimization. Vol. 2. **2003b:90001**

49–01 Instructional exposition (textbooks, tutorial papers, etc.)

Berkovitz, Leonard D. ★ Convexity and optimization in $\mathbb{R}^n$. (English summary) **2003a:49001**
Da Prato, Giuseppe Linear quadratic control theory for infinite dimensional systems. (English summary) (*see* **2003k:49004**)
Marzban, Hamid-Reza *see* **Razzaghi, Mohsen**
Razzaghi, Mohsen (*with* Marzban, Hamid-Reza) Hybrid functions in the calculus of variations. (English summary)
Wang, Hwai-Chiuan On the compactness and the minimization. (English summary) **2003i:49001**

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Ben-Tal, Aharon (*with* Nemirovskii, Arkadii) ★ Lectures on modern convex optimization. (English summary) **2003b:90002**
Costa, David G. A first encounter with variational methods in differential equations.
Intriligator, Michael D. ★ Mathematical optimization and economic theory.
Jost, Jürgen ★ Postmodern analysis. **2003m:00003**
Nemirovskii, Arkadii *see* **Ben-Tal, Aharon, 2003b:90002**
Zabczyk, Jerzy Classical control theory. (English summary) (*see* **2003k:49004**)

49–02 Research exposition (monographs, survey articles)

Agrachev, Andrei A. Introduction to optimal control theory. (English summary) (*see* **2003k:49004**)
Almgren, Frederick J., Jr. ★ Almgren's big regularity paper. **2003d:49001**
Ambrosio, Luigi (*with* Fusco, Nicola; Pallara, Diego) ★ Functions of bounded variation and free discontinuity problems. **2003a:49002**
Auslender, Alfred (*with* Teboulle, Marc) ★ Asymptotic cones and functions in optimization and variational inequalities. (English summary) **2003i:49002**
Bobylev, N. A. *see* **Emel'yanov, S. V. et al., 2003f:49001**
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Carbone, Luciano (*with* De Arcangelis, Riccardo) ★ Unbounded functionals in the calculus of variations. (English summary) **2003e:49001**
Chentsov, Aleksandr Georgievich (*with* Morina, S. I.) ★ Extensions and relaxations. (English summary) **2003m:49001**
De Arcangelis, Riccardo *see* **Carbone, Luciano, 2003e:49001**
Emel'yanov, S. V. (*with* Korovin, S. K.; Bobylev, N. A.; Bulatov, A. V.) ★ Гомотопии экстремальных задач. (Russian. Russian summary) [Homotopies of extremal problems] **2003f:49001**
Ferreira, Maria Margarida *see* **de Pinho, Maria do Rosário, 2003e:49003**
Frankowska, Halina Value function in optimal control. (English summary) (*see* **2003k:49004**)
Fusco, Nicola *see* **Ambrosio, Luigi et al., 2003a:49002**
Klatte, Diethard (*with* Kummer, Bernd) ★ Nonsmooth equations in optimization. (English summary) **2003c:49001**
Korovin, S. K. *see* **Emel'yanov, S. V. et al., 2003f:49001**
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Lagnese, John E. (*with* Leugering, Günter) Domain decomposition in optimal control problems for distributed parameter systems. (English summary) **2003j:49001**
Laporte, Emmanuel (*with* Le Tallec, Patrick) ★ Numerical methods in sensitivity analysis and shape optimization. **2003k:49001**
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Leugering, Günter *see* **Lagnese, John E., 2003j:49001**
Lyashko, Sergei I. ★ Generalized optimal control of linear systems with distributed parameters. (English summary) **2003j:49002**
Morina, S. I. *see* **Chentsov, Aleksandr Georgievich, 2003m:49001**
Mureşan, Marian ★ An introduction to set-valued analysis. **2003e:49002**
— ★ Analiză neneteda şi aplicaţii. (Romanian) [Nonsmooth analysis and applications] **2003c:49002**
Pallara, Diego *see* **Ambrosio, Luigi et al., 2003a:49002**
de Pinho, Maria do Rosário (*with* Ferreira, Maria Margarida) ★ Optimal control problems with constraints. **2003e:49003**
Rikhsiev, B. B. *see* **Satimov, N. Yu., 2003k:49002**
Satimov, N. Yu. (*with* Rikhsiev, B. B.) ★ Методы решения задачи уклонения от встречи в математической теории управления. (Russian. Russian summary) [Methods for solving problems of evading encounter in mathematical control theory] **2003k:49002**
(Scheffer, Vladimir) *see* **Almgren, Frederick J., Jr., 2003d:49001**
Stanley, Lisa G. (*with* Stewart, Dawn L.) ★ Design sensitivity analysis. **2003j:49003**
Stewart, Dawn L. *see* **Stanley, Lisa G., 2003j:49003**
Takahashi, Wataru ★ Totsu kaiseki to fudōten kinji. (Japanese) [Convex analysis & approximation of fixed points] **2003a:49003**
(Taylor, Jean E.) *see* **Almgren, Frederick J., Jr., 2003d:49001**
Teboulle, Marc *see* **Auslender, Alfred, 2003i:49002**
Zălinescu, C. ★ Convex analysis in general vector spaces. (English summary) **2003k:49003**

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Babichev, Aleksandr V. (*with* Butkovskiĭ, A. G.; Pohjolainen, Seppo A.) ★ К единой геометрической теории управления. (Russian. English and Russian summaries) [On a unified geometric theory of control] **2003a:93001**
Butkovskiĭ, A. G. *see* **Babichev, Aleksandr V. et al., 2003a:93001**
Fattorini, H. O. A survey of the time optimal problem and the norm optimal problem in infinite dimension. **2003m:49042**
Janković, Vladimir Needle variation.
— Tent theory.
Martinás, Katalin *see* **Amel'kin, S. A. et al., 2003f:49082**
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(Rozonoer, L. I.) *see* **Amel'kin, S. A. et al., 2003f:49082**
Tsirlin, A. M. *see* **Amel'kin, S. A. et al., 2003f:49082**

49–03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 49–03

Chikrii, Arkadii A. *see* **Sergīenko, Ī. V., 2003j:01037**
Hiriart-Urruty, Jean-Baptiste L'optimisation: deux ou trois choses que je sais d'elle. [Optimization: two or three things that I know about it]
(Pshenichnyĭ, B. N.) *see* **Sergīenko, Ī. V., 2003j:01037**
Sergīenko, Ī. V. (*with* Chikrii, Arkadii A.) On the scientific legacy of B. N. Pshenichnyĭ. (Russian. English and Ukrainian summaries) **2003j:01037**

49–06 Proceedings, conferences, collections, etc.

(Agrachev, Andrei A.) *see* **Mathematical control theory, 2003k:49004**
(Degiovanni, M.) *see* **Calculus of variations, nonsmooth analysis and related topics**
(Hoffmann, Karl-Heinz[1]) *see* **Fast solution of discretized optimization problems, 2003f:49002**
(Hoppe, Ronald H. W.) *see* **Fast solution of discretized optimization problems, 2003f:49002**
(Ioffe, Alexander D.) *see* **Calculus of variations, nonsmooth analysis and related topics**
(Schulz, Volker H.) *see* **Fast solution of discretized optimization problems, 2003f:49002**

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Berlin ★ Fast solution of discretized optimization problems. **2003f:49002**
Calculus of variations, nonsmooth analysis and related topics ★ Calculus of variations, nonsmooth analysis and related topics.
Development of the optimization theory for the dynamic systems and their applications ★ Dōteki shisutemu saitekika riron no tenkai to sono ōyō. [Development of the optimization theory for the dynamic systems and their applications]
Fast solution of discretized optimization problems ★ Fast solution of discretized optimization problems. **2003f:49002**
Mathematical control theory ★ Mathematical control theory. Part 1, 2. **2003k:49004**
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(Agarwal, Ravi P.) *see* **Set valued mappings with applications in nonlinear analysis, 2003e:47001**
(Aseev, S. M.) *see* **Differential equations, 2003a:00041a**
(Dontchev, Asen L.) *see* **Well-posedness in optimization and related topics**
(Galperin, Efim A.) *see* **Global optimization, control, and games**
(Lorenzi, Alfredo) *see* **Evolution equations, semigroups and functional analysis, 2003f:00028**
(Malanowski, K.) *see* **Well-posedness in optimization and related topics**
(O'Regan, Donal) *see* **Set valued mappings with applications in nonlinear analysis, 2003e:47001**
(Pontryagin, L. S.) *see* **Differential equations, 2003a:00041a** *and* **Conference: Pontryagin, Lev Semenovich, Differential Equations, 2003a:00041b**
(Ruf, Bernhard) *see* **Evolution equations, semigroups and functional analysis, 2003f:00028**
(Sergīenko, Ī. V.) *see* **Computer mathematics. Optimization of computations, 2003e:00027** *and* **2003e:00028**
(Shipshina, A. G.) *see* **Differential equations, 2003a:00041a** *and* **Conference: Pontryagin, Lev Semenovich, Differential Equations, 2003a:00041b**
(Terreni, Brunello) *see* **Evolution equations, semigroups and functional analysis, 2003f:00028**
(Vakhrameev, S. A.) *see* **Differential equations, 2003a:00041a**
(Zolezzi, T.) *see* **Well-posedness in optimization and related topics**

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Anniversary:
Birth of Pontryagin, Lev Semenovich ★ Дифференциальные уравенения. (Russian) [Differential equations] **2003a:00041a**
— ★ Pontryagin Conference. 5. Differential Equations. **2003a:00041b**
Catania ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 2.
Computer mathematics. Optimization of computations ★ Комп'ютерна математика. Оптимізація обчислень. Том 1. (Ukrainian) [Computer mathematics. Optimization of computations. Vol. 1] **2003e:00027**
— ★ Комп'ютерна математика. Оптимізація обчислень. Том 2. (Ukrainian) [Computer mathematics. Optimization of computations. Vol. 2] **2003e:00028**
Conference:
Pontryagin, Lev Semenovich ★ Дифференциальные уравенения. (Russian) [Differential equations] **2003a:00041a**

Conference: (*cont'd.*)
Pontryagin, Lev Semenovich, Differential Equations ★ Pontryagin Conference. 5. Differential Equations. **2003a:00041b**
Differential equations ★ Дифференциальные уравенения. (Russian) [Differential equations] **2003a:00041a**
Evolution equations, semigroups and functional analysis ★ Evolution equations, semigroups and functional analysis. **2003f:00028**
Global optimization, control, and games ★ Global optimization, control, and games, IV.
Memorial Volume:
Terreni, Brunello ★ Evolution equations, semigroups and functional analysis. **2003f:00028**
Milano ★ Evolution equations, semigroups and functional analysis. **2003f:00028**
Montpellier ★ Special issue on optimization.
Moscow ★ Дифференциальные уравенения. (Russian) [Differential equations] **2003a:00041a**
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Congress of Nonlinear Analysts ★ Proceedings of the Third World Congress of Nonlinear Analysts. Part 2.
Set valued mappings with applications in nonlinear analysis ★ Set valued mappings with applications in nonlinear analysis. **2003e:47001**
Special Issue:
Optimization ★ Special issue on optimization.
Warsaw ★ Well-posedness in optimization and related topics.
Well-posedness in optimization and related topics ★ Well-posedness in optimization and related topics.

49Jxx Existence theories

49J05 Free problems in one independent variable

Egorov, Yurii Vladimirovich On the Lagrange problem about the strongest column. (English and French summaries) **2003m:49002**
Egozcue, Juan José (*with* Meziat, René; Pedregal, Pablo) From a nonlinear, nonconvex variational problem to a linear, convex formulation. (English summary) **2003k:49005**
Horstmann, Dirk (*with* Kawohl, Bernd; Villaggio, Piero) Newton's aerodynamic problem in the presence of friction. (English summary) **2003f:49003**
Kawohl, Bernd *see* **Horstmann, Dirk et al., 2003f:49003**
Meziat, René *see* **Egozcue, Juan José et al., 2003k:49005**
Ornelas, António Existence and regularity for scalar minimizers of affine nonconvex simple integrals. (English summary) **2003k:49006**
Pedregal, Pablo *see* **Egozcue, Juan José et al., 2003k:49005**
Villaggio, Piero *see* **Horstmann, Dirk et al., 2003f:49003**
Yuan, Cao Bing Variation of interval-valued and fuzzy functional. (English summary)

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Giambò, Roberto (*with* Giannoni, Fabio; Piccione, Paolo) An analytical theory for Riemannian cubic polynomials. (English summary) **2003k:58015**
Giannoni, Fabio *see* **Giambò, Roberto et al., 2003k:58015**
Gordon, Russell A. A generalization of a minimum area problem.
Marzban, Hamid-Reza *see* **Razzaghi, Mohsen**
Piccione, Paolo *see* **Giambò, Roberto et al., 2003k:58015**
Razzaghi, Mohsen (*with* Marzban, Hamid-Reza) Hybrid functions in the calculus of variations. (English summary)

49J10 Free problems in two or more independent variables

Arutyunov, Aram V. (*with* Burkov, V. N.; Zalozhnev, A. Yu.; Karamzin, D. Yu.) A problem of the optimal allocation of resources over a set of independent operations. (Russian. Russian summary) **2003d:49002**
Azbelev, Nikolai Viktorovich (*with* Bravyĭ, E. I.; Gusarenko, S. A.) On effective sufficient conditions for the solvability of variational problems. (Russian) **2003a:49004**
Bianconi, Barbara (*with* Focardi, Matteo; Mascolo, Elvira) Existence of minimizers for a class of quasi-convex functionals with non-standard growth. (English summary) **2003c:49003**
Bildhauer, Michael A priori gradient estimates for bounded generalized solutions of a class of variational problems with linear growth. (English summary) **2003f:49004**
Bousselsal, M. (*with* Le Dret, Hervé) Remarks on the quasiconvex envelope of some functions depending on quadratic forms. (English and Italian summaries) **2003e:49004**
Bravyĭ, E. I. *see* **Azbelev, Nikolai Viktorovich et al., 2003a:49004**
Brüning, E. Non-convex minimization—the case of vector fields. (*see* **2003g:00021**)
Burkov, V. N. *see* **Arutyunov, Aram V. et al., 2003d:49002**
Carbone, Luciano (*with* De Arcangelis, Riccardo) On the unique extension problem for functionals of the calculus of variations. (English and Italian summaries) **2003h:49001**
Cardaliaguet, Pierre (*with* Tahraoui, Rabah) Equivalence between rank-one convexity and polyconvexity for isotropic sets of $\mathbb{R}^{2\times 2}$. I. **2003h:49002**
— (*with* Tahraoui, Rabah) Equivalence between rank-one convexity and polyconvexity for isotropic sets of $\mathbb{R}^{2\times 2}$. II. **2003h:49003**
Carillo, S. Variational setting of a nonlinear interaction problem. (English summary)
Carlson, Dean A. An observation on two methods of obtaining solutions to variational problems. (English summary) **2003j:49004**
Chantladze, T. (*with* Kandelaki, N.; Lomtatidze, A. G.; Ugulava, D.) On a generalization of the Dirichlet integral. (English summary) **2003i:49003**
Clarenz, Ulrich (*with* von der Mosel, Heiko) Isoperimetric inequalities for parametric variational problems. (English and French summaries) **2003e:49005**
— Enclosure theorems for extremals of elliptic parametric functionals. (English summary) **2003m:49003**
Crasta, Graziano (*with* Gazzola, Filippo) Web functions: survey of results and perspectives. (English summary) **2003e:49006**
— (*with* Gazzola, Filippo) Some estimates of the minimizing properties of web functions. (English summary) **2003i:49004**
De Arcangelis, Riccardo *see* **Carbone, Luciano, 2003h:49001**
Fischer, Pal (*with* Slodkowski, Zbigniew) Monotonicity of the integral mean and convex functions. (English summary) **2003d:49003**
Focardi, Matteo *see* **Bianconi, Barbara et al., 2003c:49003**
Fonseca, Irene (*with* Fusco, Nicola; Marcellini, Paolo) An existence result for a nonconvex variational problem via regularity. (English summary) **2003g:49001**
Fusco, Nicola *see* **Fonseca, Irene et al., 2003g:49001**
Gazzola, Filippo *see* **Crasta, Graziano, 2003e:49006** *and* **2003i:49004**
Gelashvili, K. (*with* Tadumadze, T.) The existence theorem for one class of multidimensional variational problem.
Giorgi, T. (*with* Smits, R. G.) Remarks on the existence of global minimizers for the Ginzburg-Landau energy functional. **2003j:49005**
Gusarenko, S. A. *see* **Azbelev, Nikolai Viktorovich et al., 2003a:49004**
Hinterberger, W. (*with* Scherzer, Otmar; Schnörr, Christoph; Weickert, Joachim) Analysis of optical flow models in the framework of the calculus of variations. (English summary) **2003g:49002**
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Karamzin, D. Yu. *see* **Arutyunov, Aram V. et al., 2003d:49002**
Kim, Kwang Ik (*with* Liu, Zu Han) Global minimizer for the Ginzburg-Landau functional of an inhomogeneous superconductor. (English summary) **2003a:49005**
Kružík, Martin Quasiconvex extreme points of convex sets. (English summary) **2003i:49005**
Lachand-Robert, Thomas (*with* Peletier, M. A.) The minimum of quadratic functionals of the gradient on the set of convex functions. (English summary) **2003j:49006**
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Leone, Chiara T-minima: some remarks about existence, uniqueness and stability results. (English summary) **2003f:49005**
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Lomtatidze, A. G. *see* **Chantladze, T. et al., 2003i:49003**
Lotarev, D. T. Application of the method for the search of the shortest path in a graph for the approximate solution of a variational problem. (Russian. Russian summary) **2003c:49004**
Marcellini, Paolo *see* **Fonseca, Irene et al., 2003g:49001**
Mascolo, Elvira *see* **Bianconi, Barbara et al., 2003c:49003**
Mirică, Ştefan Stratified right-inverses of the catenaries' mapping in calculus of variations. (English summary) **2003c:49005**
Mosconi, Sun-ra J. N. (*with* Tilli, Paolo) Variational problems with several volume constraints on the level sets. (English summary) **2003d:49004**
von der Mosel, Heiko *see* **Clarenz, Ulrich, 2003e:49005**
Muñoz, Julio Extended variational analysis for a class of nonlocal minimization principles. (English summary)
Nacinovich, Mauro (*with* Schianchi, Rosanna) Semicontinuity of a functional depending on curvature. (English summary) **2003g:49003**
Niftiev, A. A. Existence theorems for nonconvex problems of the calculus of variations. (Russian. English and Ukrainian summaries) **2003j:49007**
Orpel, Aleksandra On solutions of the Dirichlet problem for a class of partial differential inclusions with superlinear nonlinearities. (English summary) **2003h:49004**
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Schnörr, Christoph *see* **Hinterberger, W. et al., 2003g:49002**
Šilhavý, Miroslav Monotonicity of rotationally invariant convex and rank 1 convex functions. (English summary) **2003f:49006**
Slodkowski, Zbigniew *see* **Fischer, Pal, 2003d:49003**
Smits, R. G. *see* **Giorgi, T., 2003j:49005**
Tadumadze, T. *see* **Gelashvili, K.**
Taheri, Ali Strong versus weak local minimizers for the perturbed Dirichlet functional. (English summary) **2003j:49008**
— On critical points of functionals with polyconvex integrands. (English summary) **2003f:49007**
Tahraoui, Rabah *see* **Cardaliaguet, Pierre, 2003h:49002** *and* **2003h:49003**
Takahashi, Futoshi A minimization problem related to the isoperimetric inequality for H_0^1-mappings. (English summary) **2003c:49006**
Tilli, Paolo *see* **Mosconi, Sun-ra J. N., 2003d:49004**
Ugulava, D. *see* **Chantladze, T. et al., 2003i:49003**
Weickert, Joachim *see* **Hinterberger, W. et al., 2003g:49002**
Zalozhnev, A. Yu. *see* **Arutyunov, Aram V. et al., 2003d:49002**
Zhang, Ke Wei[1] Mountain pass solutions for a double-well energy. (English summary) **2003f:49008**

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Albano, Paolo Some properties of semiconcave functions with general modulus. (English summary) **2003e:49046**
Anzaldo-Meneses, Alfonso (*with* Monroy-Pérez, Felipe) Charges in magnetic fields and sub-Riemannian geodesics. (English summary) **2003d:53048**
Barthe, Franck Log-concave and spherical models in isoperimetry. (English summary) **2003d:28017**
Bellido, José C. (*with* Pedregal, Pablo) Explicit quasiconvexification for some cost functionals depending on derivatives of the state in optimal designing. (English summary) **2003j:49023**
Bethuel, Fabrice (*with* Orlandi, Giandomenico) Uniform estimates for the parabolic Ginzburg-Landau equation. (English summary) **2003k:35013**
Bildhauer, Michael (*with* Fuchs, Martin[2]) Relaxation of convex variational problems with linear growth defined on classes of vector-valued functions. (English summary) **2003e:49024**
— (*with* Fuchs, Martin[2]) Interior regularity for free and constrained local minimizers of variational integrals under general growth and ellipticity conditions. (English and Russian summaries) **2003g:49055**

Björn, Jana Boundary continuity for quasiminimizers on metric spaces. (English summary) **2003i:49068**
Boccardo, Lucio Some Dirichlet problems with bad coercivity. (English summary) **2003j:35083**
Bonnet, Alexis (*with* David, Guy) Cracktip is a global Mumford-Shah minimizer. (English summary) **2003e:49067**
Braides, Andrea (*with* Malchiodi, Andrea) Curvature theory of boundary phases: the two-dimensional case. (English summary) **2003i:49019**
— (*with* Gelli, Maria Stella; Sigalotti, M.) The passage from nonconvex discrete systems to variational problems in Sobolev spaces: the one-dimensional case. (English summary) **2003g:49017**
Brandi, Primo (*with* Salvadori, Anna) Quasi convex integrands and lower semicontinuity in BV. (English summary) **2003f:49022**
Buffoni, Boris (*with* Mielke, Alexander) On interfaces between incompatible wells and elastic deformations of infinite cylinders. (English summary) **2003a:74014**
Buttazzo, Giuseppe (*with* Timofte, Claudia) On the relaxation of some optimal partition problems. (English summary) **2003m:49019**
Carbone, Luciano (*with* De Arcangelis, Riccardo) ★ Unbounded functionals in the calculus of variations. (English summary) **2003e:49001**
Cardone, G. (*with* D'Apice, Ciro; De Maio, U.) Lavrentieff phenomenon and non standard growth conditions. (English summary) **2003d:49019**
— (*with* Corbo Esposito, Antonio; Zhikov, V. V.) An integral representation result for the Γ-limit of functionals with non-standard growth conditions in the case of elasticity. (English summary) **2003j:49024**
Carlier, Guillaume Calculus of variations with convexity constraint. (English summary) **2003g:49029**
Černý, Robert (*with* Malý, Jan) Another counterexample to lower semicontinuity in calculus of variations. (English summary) **2003c:49015**
Chipot, Michel (*with* Elfanni, A.) Some remarks on nonuniqueness of minimizers for discrete minimization problems. (English summary) **2003a:49039**
Chlebík, Miroslav (*with* Kirchheim, Bernd) Rigidity for the four gradient problem. (English summary) **2003j:49053**
Chmaj, Adam J. J. (*with* Ren, Xiaofeng) Pattern formation in the nonlocal bistable equation. (English summary) **2003j:74043**
Choksi, R. Scaling laws in microphase separation of diblock copolymers. (English summary) **2003h:82091**
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49L99 None of the above, but in this section

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49Mxx Methods of successive approximations [see also 90Cxx, 65Kxx]

49M05 Methods based on necessary conditions

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49M15 Methods of Newton-Raphson, Galerkin and Ritz types

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49M20 Methods of relaxation type

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49M25 Discrete approximations

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49M27 Decomposition methods

Items with secondary classifications in 49M27

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Lee, W. R. *see* **Teo, Kok Lay et al., 2003d:49045**
Liu, Yanqun *see* **Teo, Kok Lay et al., 2003d:49045**
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49M29 Methods involving duality

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49Nxx Miscellaneous topics

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49Q10 Optimization of shapes other than minimal surfaces [see also 90C90]

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49Q12 Sensitivity analysis

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Wever, Utz *see* **Rentrop, Peter et al., 2003e:76095**

49Q15 Geometric measure and integration theory, integral and normal currents [see also 28A75, 32C30, 58A25, 58C35]

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Figueiredo, Isabel M. N. (*with* Leal, Carlos F.) Sensitivity analysis of a nonlinear obstacle plate problem. (English summary) **2003e:49065**
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Pakzad, Mohammad Reza On topological singular set of maps with finite 3-energy into S^3. (English summary) **2003g:58019**
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49Q20 Variational problems in a geometric measure-theoretic setting

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49Q99 None of the above, but in this section

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49R50 Variational methods for eigenvalues of operators [see also 47A75]

Beattie, Christopher A. (*with* Greenlee, W. M.) Convergence theorems for intermediate problems. II. (English summary) **2003m:49069**
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49S05 Variational principles of physics

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Bellieud, Michel *see* **Bouchitté, Guy**, **2003m:74094**
Benci, Vieri Solitons and Bohmian mechanics. (English summary) **2003d:81005**
Borokhov, Vadim Belinfante tensors induced by matter-gravity couplings. (English summary) **2003h:83039**
Bouchitté, Guy (*with* Bellieud, Michel) Homogenization of a soft elastic material reinforced by fibers. (English summary) **2003m:74094**
De Simone, Antonio (*with* Dolzmann, Georg) Macroscopic response of nematic elastomers via relaxation of a class of SO(3)-invariant energies. (English summary) **2003a:74015**
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51–XX Geometry {For algebraic geometry, see 14–XX.}

51–00 General reference works (handbooks, dictionaries, bibliographies, etc.)

Items with secondary classifications in 51–00

Polster, Burkard (*with* Steinke, Günter F.) ★ Geometries on surfaces. (English summary) **2003b:51022**
Steinke, Günter F. *see* **Polster, Burkard**, **2003b:51022**

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Geometry and Applications 5th International Conference on Geometry and Applications. **2003f:00016**
Varna 5th International Conference on Geometry and Applications. **2003f:00016**

51–01 Instructional exposition (textbooks, tutorial papers, etc.)

Audin, Michèle ★ Geometry. (English summary) **2003h:51001**
Gray, Elizabeth D. *see* **Reyes, Edgar N.**
Jamm, F. (*with* Parlongue, D.) Les tas de sable. [Sandpiles]
Müller, Kurt Peter ★ Raumgeometrie. (German. German summary) [Geometry in 3-dimensional space]
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Prasanna, Shanti Linear algebra and geometry. (English summary)
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51–02 Research exposition (monographs, survey articles)

Items with secondary classifications in 51–02

Bečvář, Jindřich (*with* et al.) ★ Eduard Weyr, 1852–1903. (Czech) [Eduard Weyr, 1852–1903] **2003i:01030**
Cieslik, Dietmar ★ The Steiner ratio. (English summary) **2003e:90001**
(Dilcher, Karl) *see* **Herman, Jiřiet al.**, **2003j:00006**
Herman, Jiří (*with* Kučera, Radan; Šimša, Jaromír) ★ Counting and configurations. **2003j:00006**
Kučera, Radan *see* **Herman, Jiřiet al.**, **2003j:00006**
Šimša, Jaromír *see* **Herman, Jiřiet al.**, **2003j:00006**
(Weyr, Eduard) *see* **Bečvář, Jindřich**, **2003i:01030**
Wu, Wen-Tsun ★ Mathematics mechanization. (English summary) **2003a:01005**

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Biography:
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51–03 Historical (must also be assigned at least one classification number from Section 01)

Gruszecki, Lech From synthetic geometry to the theory of geometric structures. Changes in geometry and the development of set theory. (Polish. English summary)
Hrdličková, Jitka The origin and development of linear geometry. (Czech) (*see* **2003c:01001**)
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Marchisotto, Elena Anne The theorem of Pappus: a bridge between algebra and geometry. **2003c:51001**
Zuščák, Tomáš The Sobotka solutions of the Apollonius problem. (Czech) (*see* **2003c:01001**)

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Amiras, Lucas Zur operativen Grundlegung der Geometrie bei H. Dingler. [On the operative foundation of geometry in H. Dingler] **2003k:01015**
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Belna, Jean-Pierre Frege et la géométrie projective: la *Dissertation inaugurale* de 1873. (English and French summaries) [Frege and projective geometry: the *Inauguralschrift* of 1873] **2003g:01029**
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— *see also* **Avellone, Maurizio et al.**, **2003g:01028**
(Dehn, Max) *see* **Stillwell, John**, **2003k:01036**
(Densmore, Dana) *see* **Euclid**, **2003j:01044**
(Dingler, Hugo) *see* **Amiras, Lucas**, **2003k:01015**
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Lávička, Miroslav Josef Vojtěch Sedláček and analytical geometry. (Czech) (*see* **2003c:01001**)
Magnani, Lorenzo ★ Philosophy and geometry. **2003b:00008**
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51–04 Explicit machine computation and programs (not the theory of computation or programming)

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(Bartolone, Claudio G.) *see* **Combinatorics '98**
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51Axx Linear incidence geometry

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51A05 General theory and projective geometries

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51A10 Homomorphism, automorphism and dualities

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51A20 Configuration theorems

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51A25 Algebraization [see also 12Kxx, 20N05]

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51A30 Desarguesian and Pappian geometries

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51A35 Non-Desarguesian affine and projective planes

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51A40 Translation planes and spreads

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Draayer, Dean E. Right nuclear decomposition of generalized André systems. (English summary) **2003f:51004**
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— (*with* Johnson, Norman Lloyd[1]) Transitive deficiency-one Baer subgeometry partitions. (English summary) **2003e:51018**

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Löwe, Harald Noncompact subgroups of the reduced stabilizer of a locally compact, connected translation plane. (English summary) **2003k:51012**

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51A45 Incidence structures imbeddable into projective geometries

Arnol'd, V. I. Complexification of a tetrahedron, and pseudoprojective transformations. (Russian. Russian summary) **2003a:51002**

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Cauchie, Sara (*with* De Clerck, Frank; Hamilton, Nicholas) Full embeddings of (α,β)-geometries in projective spaces. (English summary) **2003h:51004**

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Kasikova, Anna (*with* Shult, Ernest) Absolute embeddings of point-line geometries. (English summary) **2003a:51014**

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Pralle, Harm Hyperplanes of dual polar spaces of rank 3 with no subquadrangular quad. (English summary) **2003b:51006**

Prażmowski, Krzysztof (*with* Żynel, M.) Automorphisms of spine spaces. (English summary) **2003k:51001**

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51A50 Polar geometry, symplectic spaces, orthogonal spaces

Li, Paul On the universal embedding of the $U_{2n}(2)$ dual polar space. (English summary) **2003f:51006**

Luyckx, D. (*with* Thas, Joseph A.) The uniqueness of the 1-system of $Q^-(7,q)$, q odd. (English summary) **2003f:51007**

Pralle, Harm Hyperplanes of dual polar spaces of rank 3 with no subquadrangular quad. (English summary) **2003b:51006**

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51A99 None of the above, but in this section

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51Bxx Nonlinear incidence geometry

51B05 General theory

Blunck, Andrea Finite circle planes. **2003f:51008**

Jakóbowski, Jan (*with* Matraś, Andrzej) Multicentral automorphisms in geometries of circles. (English summary) **2003a:51004**

Mallol, Cristián A practical lesson in axiomatization. (Spanish. Spanish summary)

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51B10 Möbius geometries

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Pambuccian, Victor Binary relations as single primitive notions for hyperbolic three-space and the inversive plane. (English summary) **2003e:51016**

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51B15 Laguerre geometries

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51B20 Minkowski geometries

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Gu, Wei Qing[1] *see* **Weiner, Ian**, **2003m:51004**

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Weiner, Ian (*with* Gu, Wei Qing[1]) Minkowski geometric algebra of quaternion sets. (English summary) **2003m:51004**

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51B25 Lie geometries

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Zlobec, Borut Jurčič (*with* Mramor Kosta, Neža) Configurations of cycles and the Apollonius problem. (English summary) **2003c:51019**

51B99 None of the above, but in this section

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51C05 Ring geometry (Hjelmslev, Barbilian, etc.)

Baker, Catharine Anne (*with* Lorimer, J. W.) Coordinate rings of topological Klingenberg planes. II. The algebraic foundation for a projective theory. (English summary) **2003f:51010**
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51Dxx Geometric closure systems

51D10 Abstract geometries with exchange axiom

Items with secondary classifications in 51D10

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51D15 Abstract geometries with parallelism

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51D20 Combinatorial geometries [see also 05B25, 05B35]

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Wan, Zhexian *see* **Huang, Li Ping**^{3}, **2003j:16024**
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Yuzvinsky, Sergey *see* **Denham, Graham**, **2003b:05046**

51D25 Lattices of subspaces [see also 05B35]

Items with secondary classifications in 51D25

Prażmowski, Krzysztof On a construction of affine Grassmannians and spine spaces. (English summary) **2003b:51005**

51D99 None of the above, but in this section

Items with secondary classifications in 51D99

Adaricheva, K. V. (*with* Gorbunov, V. A.; Tumanov, V. I.) Join-semidistributive lattices and convex geometries. (English summary) **2003m:06004**
Gorbunov, V. A. *see* **Adaricheva, K. V. et al.**, **2003m:06004**
Tumanov, V. I. *see* **Adaricheva, K. V. et al.**, **2003m:06004**

51Exx Finite geometry and special incidence structures

51E05 General block designs [see also 05B05]

Dempwolff, U. (*with* Kantor, William M.) Symmetric designs from the $G_2(q)$ generalized hexagons. (English summary) **2003c:51004**
Ealy, C. E., Jr. On the genus of semi λ-partialplanes. (English summary) **2003a:51008**
Kantor, William M. *see* **Dempwolff, U.**, **2003c:51004**

Items with secondary classifications in 51E05

Colbourn, Charles J. Projective planes and congestion-free networks. (English summary) **2003c:68011**
Eugeni, Franco (*with* Zannetti, Mauro) Generalized configurations. (English summary) **2003a:05037**
Hurd, Spencer P. (*with* Sarvate, Dinesh G.) Addendum to: "On c-Bhaskar Rao designs with block size 3 and negative c" [J. Combin.-Math. Combin. Comput. **38** (2001), 21–32; MR 2002f:05029]. **2003b:05027**
Sarvate, Dinesh G. *see* **Hurd, Spencer P.**, **2003b:05027**
Zannetti, Mauro *see* **Eugeni, Franco**, **2003a:05037**

51E10 Steiner systems

Chen, Guang Ting (*with* Yao, En Yu) The Steiner tree problem in λ_3-geometry. II. (Chinese. English and Chinese summaries) **2003b:51009**
Havlicek, Hans A model of the Witt design W_{12} based on quadrics of PG(2, 3). (English summary) **2003j:51003**
Rajola, S. (*with* Scafati Tallini, M.) Small maximal spreads and punctured planes in a Steiner system. (English summary) **2003j:51004**
Scafati Tallini, M. *see* **Rajola, S.**, **2003j:51004**
Yao, En Yu *see* **Chen, Guang Ting**, **2003b:51009**

Items with secondary classifications in 51E10

Gupta, Anupam Steiner points in tree metrics don't (really) help. (English summary) (*see* **2003i:68002**)
Krčadinac, Vedran Steiner 2-designs $S(2, 4, 28)$ with nontrivial automorphisms. (English summary) **2003m:05026**

51E12 Generalized quadrangles, generalized polygons

Boekholt, Sven (*with* Stroppel, Markus) Independence of axioms for fourgonal families. (English summary) **2003a:51009**
Bonisoli, Arrigo (*with* Korchmáros, Gábor) Irreducible collineation groups fixing a hyperoval. (English summary) **2003e:51004**
Brouns, Leen (*with* Thas, Joseph A.; van Maldeghem, Hendrik) m-clouds in generalized hexagons. (English summary) **2003f:51011**
— (*with* Thas, Joseph A.; van Maldeghem, Hendrik) A characteristic of $Q(5, q)$ using one subquadrangle $Q(4, q)$. (English summary) **2003d:51004**
Brown, Matthew R. A characterisation of the generalized quadrangle $Q(5, q)$ using cohomology. (English summary) **2003e:51005**
Cooperstein, B. N. (*with* Thas, Joseph A.) On generalized k-arcs in $\mathbb{PG}(2n, q)$. (English summary) **2003c:51005**
De Bruyn, Bart On the uniqueness of near polygons with three points on every line. (English summary) **2003j:51005**
— (*with* Thas, Koen) Generalized quadrangles with a spread of symmetry and near polygons. (English summary) **2003m:51005**
Govaert, Eline (*with* van Maldeghem, Hendrik) Distance-preserving maps in generalized polygons. I. Maps on flags. (English summary) **2003f:51012**
— (*with* van Maldeghem, Hendrik) Distance-preserving maps in generalized polygons. II. Maps on points and/or lines. (English summary) **2003m:51006**
Gramlich, Ralf (*with* van Maldeghem, Hendrik) Epimorphisms of generalized polygons. I. Geometrical characterizations. **2003b:51010**
Huang, Wen-ling (*with* Schroth, Andreas E.) Adjacency preserving mappings. (English summary) **2003m:51007**
Huybrechts, Cécile Dimensional dual hyperovals in projective spaces and $c \cdot \mathrm{AG}^*$-geometries. (English summary) **2003i:51004**
Kantor, William M. Note on span-symmetric generalized quadrangles. (English summary) **2003e:51006**
Korchmáros, Gábor *see* **Bonisoli, Arrigo**, **2003e:51004**
Kuijken, Elisabeth A geometric construction of partial geometries with a Hermitian point graph. (English summary) **2003f:51013**
Makhnev, A. A. Pseudo-dual lattices and extensions of generalized quadrangles. (Russian. Russian summary) **2003b:51011**
van Maldeghem, Hendrik *see* **Gramlich, Ralf**, **2003b:51010**; **Brouns, Leen et al.**, **2003d:51004**; **2003f:51011**; **Polster, Burkard**, **2003e:51007**; **Govaert, Eline**, **2003f:51012** *and* **2003m:51006**
McClurg, Phillip *see* **Sarli, John**, **2003f:51014**
Offer, Alan On the order of a generalized hexagon admitting an ovoid or spread. (English summary) **2003b:51012**
O'Keefe, Christine M. (*with* Penttila, Tim) Automorphism groups of generalized quadrangles via an unusual action of $P\Gamma L(2, 2^h)$. (English summary) **2003d:51005**
Pasini, Antonio (*with* Yoshiara, Satoshi) On a new family of flag-transitive semibiplanes. (English summary) **2003a:51010**
Penttila, Tim *see* **O'Keefe, Christine M.**, **2003d:51005**
Polster, Burkard (*with* van Maldeghem, Hendrik) Some constructions of small generalized polygons. (English summary) **2003e:51007**
— Centering small generalized polygons—projective pottery at work. (English summary) **2003h:51005**
Quinn, Catherine T. Concerning maximal arcs and inversive planes. (English summary) **2003a:51011**

Sarli, John (*with* McClurg, Phillip) A rank 3 tangent complex of $\mathrm{PSp}_4(q)$, q odd. (English summary) **2003f:51014**
Schroth, Andreas E. *see* **Huang, Wen-ling**, **2003m:51007**
Stroppel, Markus *see* **Boekholt, Sven**, **2003a:51009**
Thas, Joseph A. Translation generalized quadrangles of order (s, s^2), s even, and eggs. (English summary) **2003c:51006**
— *see also* **Cooperstein, B. N.**, **2003c:51005**; **Brouns, Leen et al.**, **2003d:51004** *and* **2003f:51011**
Thas, Koen Classification of span-symmetric generalized quadrangles of order s. (English summary) **2003f:51015**
— The classification of generalized quadrangles with two translation points. (English summary) **2003k:51005**
— A theorem concerning nets arising from generalized quadrangles with a regular point. (English summary) **2003e:51008**
— Nonexistence of complete $(st - t/s)$-arcs in generalized quadrangles of order (s, t). I. (English summary) **2003e:51009**
— *see also* **De Bruyn, Bart**, **2003m:51005**
Tits, Jacques (*with* Weiss, Richard M.) ★ Moufang polygons. (English summary) **2003m:51008**
Weiss, Richard M. *see* **Tits, Jacques**, **2003m:51008**
Yoshiara, Satoshi *see* **Pasini, Antonio**, **2003a:51010**

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Abramenko, Peter (*with* van Maldeghem, Hendrik) Characterisations of generalized polygons and opposition in rank 2 twin buildings. (English summary) **2003i:51011**
Bader, Laura (*with* de Resmini, Marialuisa J.) On some Kantor flocks. (English summary) **2003h:51008**
Dempwolff, U. (*with* Kantor, William M.) Symmetric designs from the $G_2(q)$ generalized hexagons. (English summary) **2003c:51004**
Immervoll, Stefan Smooth generalized quadrangles and isoparametric hypersurfaces of Clifford type. (English summary) **2003i:53083**
Kantor, William M. *see* **Dempwolff, U.**, **2003c:51004**
Lo Re, Pia Maria (*with* Olanda, Domenico) Embeddability of a class of planar spaces. (Italian. Italian summary) **2003f:51005**
van Maldeghem, Hendrik *see* **Abramenko, Peter**, **2003i:51011**
Ng, Siaw-Lynn Some properties of the Yoshiara family of planes. (English summary) **2003e:51011**
Olanda, Domenico *see* **Lo Re, Pia Maria**, **2003f:51005**
Polster, Burkard (*with* Steinke, Günter F.) ★ Geometries on surfaces. (English summary) **2003b:51022**
de Resmini, Marialuisa J. *see* **Bader, Laura**, **2003h:51008**
Steinke, Günter F. *see* **Polster, Burkard**, **2003b:51022**
Stroppel, Bernhild Point-affine quadrangles. (English summary) **2003d:51002**
Thas, Joseph A. Ovoids, spreads and m-systems of finite classical polar spaces. (English summary) **2003a:51003**

51E14 Finite partial geometries (general), nets, partial spreads

De Clerck, Frank (*with* Delanote, Mario; Hamilton, Nicholas; Mathon, Rudolf) Perp-systems and partial geometries. (English summary) **2003g:51002**
Delanote, Mario *see* **De Clerck, Frank et al.**, **2003g:51002**
Eisfeld, Jörg (*with* Storme, Leo; Sziklai, P.) Minimal covers of $Q^+(2n+1, q)$ by $(n-1)$-dimensional subspaces. (English summary) **2003c:51007**
Hamilton, Nicholas *see* **De Clerck, Frank et al.**, **2003g:51002**
Jha, Vikram (*with* Johnson, Norman Lloyd[1]) Transversal-free translation nets. (English summary) **2003g:51003**
Johnson, Norman Lloyd[1] *see* **Jha, Vikram**, **2003g:51003**
Makhnev, A. A. On pseudogeometric graphs of some partial geometries. (Russian. English and Russian summaries) **2003m:51009**
Mathon, Rudolf *see* **De Clerck, Frank et al.**, **2003g:51002**
Metsch, Klaus (*with* Storme, Leo) Partial linear complexes of $\mathrm{PG}(3, q)$. (English summary) **2003g:51004**
Storme, Leo *see* **Eisfeld, Jörg et al.**, **2003c:51007** *and* **Metsch, Klaus**, **2003g:51004**
Sziklai, P. *see* **Eisfeld, Jörg et al.**, **2003c:51007**
White, Arthur T. Modelling finite geometries on surfaces. (English summary) **2003a:51012**

Items with secondary classifications in 51E14

Al-Kenani, A. N. (*with* Mavron, V. C.) Non-tactical symmetric nets. (English summary) **2003m:05037**
Jha, Vikram (*with* Johnson, Norman Lloyd[1]) Lifting quasifibrations. II. Non-normalizing Baer involutions. (English summary) **2003e:51017**
Johnson, Norman Lloyd[1] *see* **Jha, Vikram**, **2003e:51017**
Mavron, V. C. *see* **Al-Kenani, A. N.**, **2003m:05037**
Mellinger, Keith E. A note on line-Baer subspace partitions of $\mathrm{PG}(3, 4)$. (English summary) **2003a:51013**
Thas, Koen A theorem concerning nets arising from generalized quadrangles with a regular point. (English summary) **2003e:51008**

51E15 Affine and projective planes

Bianchi, Mariagrazia (*with* Gillio Berta Mauri, Anna; Verardi, Libero) Subgroup-permutability and affine planes. (English summary) **2003h:51006**
Biliotti, Mauro (*with* Jha, Vikram; Johnson, Norman Lloyd[1]) Two-transitive ovals in generalized twisted field planes. (English summary) **2003i:51005**
Casse, Louis Reynolds Antoine *see* **Oxenham, Martin**, **2003m:51010**
Eugeni, Franco (*with* Tondini, Daniela) Klein's discrete model: the case of odd order. (English summary) **2003h:51007**
Evdokimov, S. A. (*with* Ponomarenko, I. N.) Rings of finite projective planes and their isomorphisms. (Russian. English and Russian summaries) **2003g:51005**
Gillio Berta Mauri, Anna *see* **Bianchi, Mariagrazia et al.**, **2003h:51006**
Golomb, Solomon W. (*with* Taylor, Herbert) Cyclic projective planes, perfect circular rulers, and good spanning rulers. (English summary) **2003f:51016**
Gordon, Neil A. Geometric and algebraic canonical forms. (English summary) **2003e:51010**
Jha, Vikram *see* **Biliotti, Mauro et al.**, **2003i:51005**
Johnson, Norman Lloyd[1] *see* **Biliotti, Mauro et al.**, **2003i:51005**
Jungnickel, Dieter (*with* de Resmini, Marialuisa J.) Another case of the prime power conjecture for finite projective planes. (English summary) **2003f:51017**
Mathon, Rudolf (*with* Street, Anne Penfold) Partitioning sets of triples into small planes. (English summary) **2003f:51018**
Miller, Mark Anderson Finite thinking in an infinite world. **2003i:51006**
Oxenham, Martin (*with* Casse, Louis Reynolds Antoine) Towards the determination of the regular n-covers of $\mathrm{PG}(3, q)$. (English and Italian summaries) **2003m:51010**
Ponomarenko, I. N. *see* **Evdokimov, S. A.**, **2003g:51005**
de Resmini, Marialuisa J. *see* **Jungnickel, Dieter**, **2003f:51017**
Street, Anne Penfold *see* **Mathon, Rudolf**, **2003f:51018**
Taylor, Herbert *see* **Golomb, Solomon W.**, **2003f:51016**
Tondini, Daniela *see* **Eugeni, Franco**, **2003h:51007**
Verardi, Libero *see* **Bianchi, Mariagrazia et al.**, **2003h:51006**

Items with secondary classifications in 51E15

Betten, Dieter (*with* Glynn, David G.) Über endliche planare Funktionen, ihre zugehörenden Schiebebenen, und ihre abgeleiteten Translationsebenen. (German summary) [On finite planar functions, their associated shift planes, and their derived translation planes] **2003e:51002**
Cerroni, Cinzia Divisible designs from semifield planes. (English summary) **2003g:05036**
Draayer, Dean E. Right nuclear decomposition of generalized André systems. (English summary) **2003f:51004**
— Translation planes admitting a pair of index three homology groups. (English summary) **2003g:51001**
Givant, Steven Inequivalent representations of geometric relation algebras. (English summary) **2003m:03114**
Glynn, David G. *see* **Betten, Dieter**, **2003e:51002**
Hamilton, Nicholas Strongly regular graphs from differences of quadrics. (English summary) **2003c:05224**
Jakóbowski, Jan Nearaffine planes related to pseudo-ordered fields. (English summary) **2003j:51002**
Kharaghani, Hadi (*with* Tonchev, Vladimir D.) On a class of twin balanced incomplete block designs. (English summary) **2003m:05024**
Kung, Joseph P. S. Curious characterizations of projective and affine geometries. (English summary) **2003c:51008**
Pambuccian, Victor On definitions in an infinitary language. (English summary) **2003h:03052**
Podufalov, N. D. Functions on linear spaces associated with finite projective planes. (Russian. Russian summary) **2003i:51003**
Rinaldi, Gloria (*with* Zironi, Fernando) Complete unital-derived arcs in the Hall plane of order 9. (English summary) **2003h:51009**
Tonchev, Vladimir D. *see* **Kharaghani, Hadi**, **2003m:05024**
Zironi, Fernando *see* **Rinaldi, Gloria**, **2003h:51009**

51E20 Combinatorial structures in finite projective spaces [see also 05Bxx]

Bader, Laura (*with* Cossidente, Antonio; Lunardon, Guglielmo) Generalizing flocks of $Q^+(3, q)$. (English summary) **2003b:51013**
— (*with* Cossidente, Antonio; de Resmini, Marialuisa J.) Partitioning Segre varieties and projective spaces. (English summary) **2003b:51014**
— (*with* de Resmini, Marialuisa J.) On some Kantor flocks. (English summary) **2003h:51008**
Bokler, Martin (*with* Metsch, Klaus) On the smallest minimal blocking sets in projective space generating the whole space. (English summary) **2003f:51019**
Casse, Louis Reynolds Antoine (*with* Quinn, Catherine T.) Ruled cubic surfaces in $\mathrm{PG}(4, q)$, Baer subplanes of $\mathrm{PG}(2, q^2)$ and Hermitian curves. (English summary) **2003d:51006**
Cossidente, Antonio (*with* Korchmáros, Gábor) Transitive ovoids of the Hermitian surface of $\mathrm{PG}(3, q^2)$, q even. (English summary) **2003k:51006**
— *see also* **Bader, Laura et al.**, **2003b:51013** *and* **2003b:51014**
Donati, Giorgio (*with* Durante, Nicola) Some subsets of the Hermitian curve. (English summary) **2003m:51011**
Durante, Nicola (*with* Siciliano, Alessandro) (B)-geometries and flocks of hyperbolic quadrics. (English summary) **2003m:51012**
— *see also* **Donati, Giorgio**, **2003m:51011**
Ferri, Osvaldo (*with* Ferri, Stefania; Giallonardo, Antonella) On the elliptic quadrics of $\mathrm{PG}(2s+1, q)$. (English summary) **2003m:51013**
Ferri, Stefania *see* **Ferri, Osvaldo et al.**, **2003m:51013**
Giallonardo, Antonella *see* **Ferri, Osvaldo et al.**, **2003m:51013**
Giuzzi, Luca A characterisation of classical unitals. (English summary) **2003i:51007**
Hadnagy, Éva (*with* Sonnino, Angelo) Complete arcs in inversive planes over prime fields. (English summary) **2003i:51008**
— (*with* Kovács, István[2]) Sets with a large number of nuclei on a cubic curve. (English summary) **2003m:51014**
Korchmáros, Gábor *see* **Cossidente, Antonio**, **2003k:51006**
Kovács, István[2] *see* **Hadnagy, Éva**, **2003m:51014**
Kung, Joseph P. S. Curious characterizations of projective and affine geometries. (English summary) **2003c:51008**
Lunardon, Guglielmo *see* **Bader, Laura et al.**, **2003b:51013**
Metsch, Klaus *see* **Bokler, Martin**, **2003f:51019**
Napolitano, Vito A characterization of reguli in $\mathrm{PG}(3, K)$ and $\mathrm{PG}(5, K)$. (English summary) **2003f:51020**

Ng, Siaw-Lynn Some properties of the Yoshiara family of planes. (English summary) **2003e:51011**
Quinn, Catherine T. *see* **Casse, Louis Reynolds Antoine, 2003d:51006**
de Resmini, Marialuisa J. *see* **Bader, Laura et al., 2003b:51014** *and* **2003h:51008**
Siciliano, Alessandro *see* **Durante, Nicola, 2003m:51012**
Sonnino, Angelo *see* **Hadnagy, Éva, 2003i:51008**
Wang, Kai Shun (*with* Zhang, Geng Sheng) Geometric construction of association schemes from conics in a projective plane. (Chinese. English and Chinese summaries) **2003b:51015**
— (*with* Wei, Hongzeng; Zhang, Geng Sheng) An Anzahl theorem in singular pseudo-symplectic geometry over finite fields. (English summary) **2003f:51021**
Wei, Hongzeng *see* **Wang, Kai Shun et al., 2003f:51021**
Zhang, Geng Sheng *see* **Wang, Kai Shun et al., 2003b:51015** *and* **2003f:51021**

Items with secondary classifications in 51E20

Bader, Laura (*with* Durante, Nicola; Law, Maska; Lunardon, Guglielmo; Penttila, Tim) Flocks and partial flocks of hyperbolic quadrics via root systems. (English summary) **2003i:05031**
Betten, Dieter (*with* Glynn, David G.) Über endliche planare Funktionen, ihre zugehörenden Schiebebenen, und ihre abgeleiteten Translationsebenen. (German summary) [On finite planar functions, their associated shift planes, and their derived translation planes] **2003e:51002**
Cerroni, Cinzia Divisible designs from semifield planes. (English summary) **2003g:05036**
Cossidente, Antonio (*with* Napolitano, Vito) Classical varieties and caps. (English summary) **2003b:51018**
— (*with* Siciliano, Alessandro) On tangent spaces and external flats to Grassmannians of lines over finite fields. (English summary) **2003b:51004**
De Bruyn, Bart (*with* Thas, Koen) Generalized quadrangles with a spread of symmetry and near polygons. (English summary) **2003m:51005**
Durante, Nicola *see* **Bader, Laura et al., 2003i:05031**
Faina, Giorgio (*with* Kiss, György; Marcugini, Stefano; Pambianco, Fernanda) The cyclic model for $PG(n,q)$ and a construction of arcs. (English summary) **2003b:51017**
Giulietti, Massimo (*with* Pambianco, Fernanda; Torres, Fernando; Ughi, Emanuela) On complete arcs arising from plane curves. (English summary) **2003e:51013**
Glynn, David G. *see* **Betten, Dieter, 2003e:51002**
Ivanov, Aleksandr Anatol'evich Non-abelian representations of geometries. (English summary) **2003d:51008**
Johnson, Norman Lloyd[1] Some new classes of finite parallelisms. (English summary) **2003e:51019**
Jung, Yoon-Tae *see* **Kang, Sungkwon et al., 2003d:05025**
Kang, Sungkwon (*with* Jung, Yoon-Tae; Lee, Ju-Hyun) Sufficient conditions and construction of symmetric BIBD. (English summary) **2003d:05025**
Kiss, György *see* **Faina, Giorgio et al., 2003b:51017**
Law, Maska *see* **Bader, Laura et al., 2003i:05031**
Lee, Ju-Hyun *see* **Kang, Sungkwon et al., 2003d:05025**
Lo Re, Pia Maria (*with* Olanda, Domenico) Embeddability of a class of planar spaces. (Italian. Italian summary) **2003f:51005**
Lunardon, Guglielmo *see* **Bader, Laura et al., 2003i:05031**
Luyckx, D. (*with* Thas, Joseph A.) The uniqueness of the 1-system of $Q^-(7,q)$, q odd. (English summary) **2003f:51007**
Marcugini, Stefano *see* **Faina, Giorgio et al., 2003b:51017**
Mathon, Rudolf (*with* Street, Anne Penfold) Partitioning sets of triples into small planes. (English summary) **2003f:51018**
Maturo, Antonio (*with* Zannetti, Mauro) Rédei blocking sets with two Rédei lines and quasigroups. (English summary) **2003i:51010**
Mellinger, Keith E. A note on line-Baer subspace partitions of $PG(3,4)$. (English summary) **2003a:51013**
Miller, Mark Anderson Finite thinking in an infinite world. **2003i:51006**
Napolitano, Vito *see* **Cossidente, Antonio, 2003b:51018**
Olanda, Domenico *see* **Lo Re, Pia Maria, 2003f:51005**
Pambianco, Fernanda *see* **Faina, Giorgio et al., 2003b:51017** *and* **Giulietti, Massimo et al., 2003e:51013**
Penttila, Tim *see* **Bader, Laura et al., 2003i:05031**
Polito, Pompeo (*with* Polverino, Olga) On linear blocking sets in $PG(2,q^t)$. (English summary) **2003k:51008**
Polverino, Olga *see* **Polito, Pompeo, 2003k:51008**
Rajola, S. (*with* Scafati Tallini, M.) Small maximal spreads and punctured planes in a Steiner system. (English summary) **2003j:51004**
Scafati Tallini, M. *see* **Rajola, S., 2003j:51004**
Siciliano, Alessandro *see* **Cossidente, Antonio, 2003b:51004**
Street, Anne Penfold *see* **Mathon, Rudolf, 2003f:51018**
Thas, Joseph A. *see* **Luyckx, D., 2003f:51007**
Thas, Koen Nonexistence of complete $(st-t/s)$-arcs in generalized quadrangles of order (s,t). I. (English summary) **2003e:51009**
— *see also* **De Bruyn, Bart, 2003m:51005**
Torres, Fernando *see* **Giulietti, Massimo et al., 2003e:51013**
Ughi, Emanuela *see* **Giulietti, Massimo et al., 2003e:51013**
Zanella, Corrado Intersection sets in $AG(n,q)$ and a characterization of the hyperbolic quadric in $PG(3,q)$. (English summary) **2003h:51010**
Zannetti, Mauro *see* **Maturo, Antonio, 2003i:51010**

51E21 Blocking sets, ovals, k-arcs

Blokhuis, Aart (*with* Lavrauw, Michel) On two-intersection sets with respect to hyperplanes in projective spaces. (English summary) **2003e:51012**
Bokler, Martin Minimal blocking sets in projective spaces of square order. (English summary) **2003c:51009**
Cassetta, Nicola A blocking set in $AG(3,5)$. (English summary) **2003b:51016**
Edel, Yves (*with* Ferret, S.; Landgev, Ivan N.; Storme, Leo) The classification of the largest caps in $AG(5,3)$. (English summary) **2003f:51022**
Faina, Giorgio (*with* Kiss, György; Marcugini, Stefano; Pambianco, Fernanda) The cyclic model for $PG(n,q)$ and a construction of arcs. (English summary) **2003b:51017**
Ferret, S. *see* **Edel, Yves et al., 2003f:51022**
Ghinelli-Smit, Dina *see* **de Resmini, Marialuisa J. et al., 2003g:51007**
Giulietti, M. (*with* Pambianco, Fernanda; Torres, Fernando; Ughi, Emanuela) On large complete arcs: odd case. (English summary) **2003g:51006**
Giulietti, Massimo (*with* Pambianco, Fernanda; Torres, Fernando; Ughi, Emanuela) On complete arcs arising from plane curves. (English summary) **2003e:51013**
— On cyclic k-arcs of Singer type in $PG(2,q)$. (English summary) **2003f:51023**
Govaerts, P. (*with* Storme, Leo) On a particular class of minihypers and its applications. I. The result for general q. (English summary) **2003m:51015**
Hadnagy, Éva (*with* Szőnyi, Tamás) On embedding partial unitals and large (k,n)-arcs. (English summary) **2003i:51009**
Hamilton, Nicholas Degree 8 maximal arcs in $PG(2,2^h)$, h odd. (English summary) **2003k:51007**
Jungnickel, Dieter *see* **de Resmini, Marialuisa J. et al., 2003g:51007**
Kiss, György *see* **Faina, Giorgio et al., 2003b:51017**
Landgev, Ivan N. *see* **Edel, Yves et al., 2003f:51022**
Lavrauw, Michel *see* **Blokhuis, Aart, 2003e:51012**
Lunardon, Guglielmo (*with* Polito, Pompeo; Polverino, Olga) A geometric characterisation of linear k-blocking sets. (English summary) **2003j:51006**
Marcugini, Stefano *see* **Faina, Giorgio et al., 2003b:51017**
Maturo, Antonio (*with* Zannetti, Mauro) Rédei blocking sets with two Rédei lines and quasigroups. (English summary) **2003i:51010**
Pambianco, Fernanda *see* **Faina, Giorgio et al., 2003b:51017**; **Giulietti, Massimo et al., 2003e:51013** *and* **Giulietti, M. et al., 2003g:51006**
Polito, Pompeo (*with* Polverino, Olga) Linear blocking sets in $PG(2,q^4)$. (English summary) **2003e:51014**
— (*with* Polverino, Olga) On linear blocking sets in $PG(2,q^t)$. (English summary) **2003k:51008**
— *see also* **Lunardon, Guglielmo et al., 2003j:51006**
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— *see also* **Giulietti, Massimo et al., 2003e:51013** *and* **Giuletti, M. et al., 2003g:51006**
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Bokler, Martin (*with* Metsch, Klaus) On the smallest minimal blocking sets in projective space generating the whole space. (English summary) **2003f:51019**
Bonisoli, Arrigo (*with* Korchmáros, Gábor) Irreducible collineation groups fixing a hyperoval. (English summary) **2003e:51004**
Cossidente, Antonio (*with* Napolitano, Vito) On some complete intersections in $PG(3,q)$. (English summary) **2003k:05030**
Dobbertin, Hans Uniformly representable permutation polynomials. (English summary) **2003e:11134**
Giuzzi, Luca A characterisation of classical unitals. (English summary) **2003i:51007**
Hadnagy, Éva (*with* Sonnino, Angelo) Complete arcs in inversive planes over prime fields. (English summary) **2003i:51008**
Jha, Vikram *see* **Biliotti, Mauro et al., 2003i:51005**
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Metsch, Klaus *see* **Bokler, Martin, 2003f:51019**
Napolitano, Vito *see* **Cossidente, Antonio, 2003k:05030**
O'Keefe, Christine M. (*with* Penttila, Tim) Automorphism groups of generalized quadrangles via an unusual action of $P\Gamma L(2,2^h)$. (English summary) **2003d:51005**
Penttila, Tim *see* **O'Keefe, Christine M., 2003d:51005**
Sonnino, Angelo *see* **Hadnagy, Éva, 2003i:51008**
Thas, Koen Nonexistence of complete $(st-t/s)$-arcs in generalized quadrangles of order (s,t). I. (English summary) **2003e:51009**

51E22 Linear codes and caps in Galois spaces [see also 94B05]

AlBdaiwi, Bader F. (*with* Horák, Peter) Perfect distance-d placements in 3-dimensional tori. (English summary) **2003k:51010**
Baker, Ronald D. (*with* Bonisoli, Arrigo; Cossidente, Antonio; Ebert, G. L.) Cap partitions of the Segre variety $\mathcal{S}_{1,3}$. (English summary) **2003h:51011**
Bierbrauer, Jürgen (*with* Edel, Yves) Bounds on affine caps. (English summary) **2003e:51015**
Bonisoli, Arrigo *see* **Baker, Ronald D. et al., 2003h:51011**
Cossidente, Antonio (*with* Napolitano, Vito) Classical varieties and caps. (English summary) **2003b:51018**
— *see also* **Baker, Ronald D. et al., 2003h:51011**

Ebert, G. L. *see* **Baker, Ronald D. et al., 2003h:51011**
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Horák, Peter *see* **AlBdaiwi, Bader F., 2003k:51010**
Napolitano, Vito *see* **Cossidente, Antonio, 2003b:51018**
Pellikaan, Ruud The Klein quartic, the Fano plane and curves representing designs. **2003b:51019**
Storme, Leo (*with* Thas, Joseph A.; Vereecke, S. K. J.) New upper bounds for the sizes of caps in finite projective spaces. (English summary) **2003e:51016**
Thas, Joseph A. *see* **Storme, Leo et al., 2003e:51016**
Vereecke, S. K. J. *see* **Storme, Leo et al., 2003e:51016**

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Drápal, Aleš Yet another approach to the extended ternary Golay code. (English summary) **2003j:94113**
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Kato, Takao (*with* Yamada, Miyako) Projective systems whose supports consist of the union of three linear subspaces. (English summary) **2003b:94068**
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Milani, Alfredo *see* **Marcugini, Stefano et al., 2003e:94109**
Narasimha Sastry, N. S. *see* **Inamdar, S. P., 2003g:94057**
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Samorodnitsky, Alex On the optimum of Delsarte's linear program. (English summary) **2003g:94065**
Yamada, Miyako *see* **Kato, Takao, 2003b:94068**

51E23 Spreads and packing problems

Cardinali, I. (*with* Lunardon, Guglielmo; Polverino, Olga; Trombetti, R.) Spreads in $H(q)$ and 1-systems of $Q(6, q)$. (English summary) **2003d:51007**
Jha, Vikram (*with* Johnson, Norman Lloyd[1]) Lifting quasifibrations. II. Non-normalizing Baer involutions. (English summary) **2003e:51017**
— (*with* Johnson, Norman Lloyd[1]) Transitive deficiency-one Baer subgeometry partitions. (English summary) **2003e:51018**
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— (*with* Pomareda, Rolando) Translation planes with many homologies. II. Odd order. (English summary) **2003b:51020**
— Transversal spreads. (English summary) **2003k:51011**
— (*with* Pomareda, Rolando) m-parallelisms. (English summary) **2003h:51012**
— *see also* **Jha, Vikram, 2003e:51017** *and* **2003e:51018**
Lunardon, Guglielmo *see* **Cardinali, I. et al., 2003d:51007**
Mellinger, Keith E. A note on line-Baer subspace partitions of PG(3, 4). (English summary) **2003a:51013**
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De Bruyn, Bart (*with* Thas, Koen) Generalized quadrangles with a spread of symmetry and near polygons. (English summary) **2003m:51005**
Govaerts, P. (*with* Storme, Leo) On a particular class of minihypers and its applications. I. The result for general q. (English summary) **2003m:51015**
Hadnagy, Éva (*with* Sonnino, Angelo) Complete arcs in inversive planes over prime fields. (English summary) **2003i:51008**
Jha, Vikram (*with* Johnson, Norman Lloyd[1]) Transversal-free translation nets. (English summary) **2003g:51003**
Johnson, Norman Lloyd[1] (*with* Pomareda, Rolando) Transitive partial parallelisms of deficiency one. (English summary) **2003h:51003**
— *see also* **Jha, Vikram, 2003g:51003**
Lavrauw, Michel *see* **Blokhuis, Aart, 2003e:51012**
Pomareda, Rolando *see* **Johnson, Norman Lloyd[1], 2003h:51003**
Rajola, S. (*with* Scafati Tallini, M.) Small maximal spreads and punctured planes in a Steiner system. (English summary) **2003j:51004**
Scafati Tallini, M. *see* **Rajola, S., 2003j:51004**
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Storme, Leo *see* **Govaerts, P., 2003m:51015**
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51E24 Buildings and the geometry of diagrams

Abramenko, Peter (*with* van Maldeghem, Hendrik) Characterisations of generalized polygons and opposition in rank 2 twin buildings. (English summary) **2003i:51011**
Cara, Philippe (*with* Leemans, Dimitri) The residually weakly primitive geometries of $S_5 \times 2$. (English summary) **2003i:51012**
Dehon, Michel (*with* Leemans, Dimitri) Constructing coset geometries with MAGMA: an application to the sporadic groups M_{12} and J_1. (English summary) **2003m:51016**
Ivanov, Aleksandr Anatol'evich Non-abelian representations of geometries. (English summary) **2003d:51008**
Kasikova, Anna (*with* Shult, Ernest) Absolute embeddings of point-line geometries. (English summary) **2003a:51014**
Kim, Ju-Lee (*with* Moy, Allen) Involutions, classical groups, and buildings. (English summary) **2003d:51009**
Leemans, Dimitri The residually weakly primitive pre-geometries of the Suzuki simple groups. (English summary) **2003b:51021**
— *see also* **Cara, Philippe, 2003i:51012** *and* **Dehon, Michel, 2003m:51016**
van Maldeghem, Hendrik *see* **Abramenko, Peter, 2003i:51011**
Moy, Allen *see* **Kim, Ju-Lee, 2003d:51009**
Rousseau, Guy Exercices métriques immobiliers. (English summary) [On the metrics of buildings] **2003g:51009**
Shult, Ernest *see* **Kasikova, Anna, 2003a:51014**

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Bourdon, Marc (*with* Pajot, Hervé) Rigidity of quasi-isometries for some hyperbolic buildings. (English summary) **2003a:30027**
Broussous, Paul (*with* Lemaire, Bertrand) Building of $\mathrm{GL}(m, D)$ and centralizers. (English summary) **2003c:20060**
Cartwright, Donald I. (*with* Steger, Tim) Elementary symmetric polynomials in numbers of modulus 1. (English summary) **2003h:05188**
Huang, Wen-ling (*with* Schroth, Andreas E.) Adjacency preserving mappings. (English summary) **2003m:51007**
Huybrechts, Cécile Dimensional dual hyperovals in projective spaces and $c \cdot \mathrm{AG}^*$-geometries. (English summary) **2003i:51004**
Ivanov, Aleksandr Anatol'evich (*with* Shpektorov, S. V.) ★ Geometry of sporadic groups. II. (English summary) **2003i:20027**
Kasikova, Anna (*with* Shult, Ernest) Point-like characterizations of Lie geometries. (English summary) **2003b:51008**
Kramer, Linus Homogeneous spaces, Tits buildings, and isoparametric hypersurfaces. (English summary) **2003m:53078**
Lemaire, Bertrand *see* **Broussous, Paul, 2003c:20060**
Mantero, Anna Maria (*with* Zappa, Anna) Eigenfunctions of the Laplace operators for buildings of type $\tilde{B}_2$. (English and Italian summaries) **2003a:35137**
— (*with* Zappa, Anna) Boundary behaviour of Poisson integrals on buildings of type $\tilde{A}_2$. (English summary) **2003i:31010**
Noskov, Gen. A. Bounded shortening in Coxeter complexes and buildings. (English summary) **2003a:20064**
Pajot, Hervé *see* **Bourdon, Marc, 2003a:30027**
Pralle, Harm Hyperplanes of dual polar spaces of rank 3 with no subquadrangular quad. (English summary) **2003b:51006**
Rémy, Bertrand Groupes de Kac-Moody déployés et presque déployés. (English and French summaries) [Split and almost split Kac-Moody groups] **2003d:20036**
— Immeubles de Kac-Moody hyperboliques, groupes non isomorphes de même immeuble. (English summary) [Hyperbolic Kac-Moody buildings, nonisomorphic groups with the same building] **2003c:20033**
Sawabe, Masato On a p-local geometry associated with a complex of non-trivial p-subgroups. (English summary) **2003j:20044**
Schroth, Andreas E. *see* **Huang, Wen-ling, 2003m:51007**
Shpektorov, S. V. *see* **Ivanov, Aleksandr Anatol'evich, 2003i:20027**
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Skandalis, Georges Progrès récents sur la conjecture de Baum-Connes. Contribution de Vincent Lafforgue. [Recent progress on the Baum-Connes conjecture: the contribution of Vincent Lafforgue] **2003h:19007**
Steger, Tim *see* **Cartwright, Donald I., 2003h:05188**
Talbi, Malik Inégalité de Haagerup, groupoïdes et immeubles euclidiens. (English and French summaries) [Haagerup's inequality, groupoids and Euclidean buildings] **2003j:20053**
Tits, Jacques (*with* Weiss, Richard M.) ★ Moufang polygons. (English summary) **2003m:51008**
Vdovina, Alina Combinatorial structure of some hyperbolic buildings. (English summary) **2003m:20040**
Weiss, Richard M. *see* **Tits, Jacques, 2003m:51008**
Zappa, Anna *see* **Mantero, Anna Maria, 2003a:35137** *and* **2003i:31010**

51E25 Other finite nonlinear geometries

Items with secondary classifications in 51E25

Kimberley, Jason S. (*with* Robertson, A. Guyan) Groups acting on products of trees, tiling systems and analytic K-theory. (English summary) **2003j:20042**
Robertson, A. Guyan *see* **Kimberley, Jason S., 2003j:20042**

51E26 Other finite linear geometries

Durante, Nicola (*with* Napolitano, Vito; Olanda, Domenico) On k-sets of class $[1, h]$ in a planar space. (English summary) **2003m:51017**
— Finite linear spaces with $b - v \in \{M, M + 1\}$. (English summary) **2003h:51013**
Freni Casale, Sveva Quasiparallel planes in finite plane spaces. (English summary) **2003j:51008**
Napolitano, Vito On finite weakly $\{s, t\}$-semiaffine linear spaces. (English summary) **2003i:51013**
— *see also* **Durante, Nicola et al., 2003m:51017**
Olanda, Domenico *see* **Durante, Nicola et al., 2003m:51017**

Items with secondary classifications in 51E26

Greig, Malcolm Finite linear spaces. II. (English summary) **2003h:05055**
Lo Re, Pia Maria (*with* Olanda, Domenico) Embeddability of a class of planar spaces. (Italian. Italian summary) **2003f:51005**
Olanda, Domenico *see* **Lo Re, Pia Maria, 2003f:51005**

51E30 Other finite incidence structures [see also 05B30]

Cárdenas, Humberto (*with* Lluis Riera, Emilio; Raggi-Cárdenas, A. Gerardo; San Agustín Chi, Rodolfo) Partial linear spaces with dual affine planes. **2003g:51010**

Lluis Riera, Emilio *see* **Cárdenas, Humberto et al., 2003g:51010**
Raggi-Cárdenas, A. Gerardo *see* **Cárdenas, Humberto et al., 2003g:51010**
San Agustín Chi, Rodolfo *see* **Cárdenas, Humberto et al., 2003g:51010**

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Fuji-Hara, Ryoh (*with* Miao, Ying) A note on geometric structures of linear ordered orthogonal arrays and (T, M, S)-nets of low strength. (English summary) **2003g:05031**
Miao, Ying *see* **Fuji-Hara, Ryoh, 2003g:05031**

51E99 None of the above, but in this section

Al-Jubouri, Neda'a K. Torsion-free subgroups of the dodecahedron group. (English summary) **2003g:51011**
Drudge, Keldon On the orbits of Singer groups and their subgroups. (English summary) **2003d:51010**
Sudoplatov, S. V. On the classification of group polygonometries. (Russian. Russian summary) **2003e:51020a**
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Ballico, Edoardo On the finite field Nullstellensatz for the intersection of two quadric hypersurfaces. **2003b:14029**
Cossidente, Antonio (*with* Funk, M.; Labbate, D.) Graphs arising from mixed partitions of PG$(5, q)$. (English summary) **2003d:05177**
Falk, Michael J. Line-closed matroids, quadratic algebras, and formal arrangements. (English summary) **2003a:05040**
Funk, M. *see* **Cossidente, Antonio et al., 2003d:05177**
Jungnickel, Dieter (*with* Mavron, V. C.; McDonough, T. P.) The geometry of frequency squares. (English summary) **2003a:05033**
Karzel, H. (*with* Pianta, Silvia; Zizioli, Elena) K-loops derived from Frobenius groups. (English summary) **2003g:20114**
Labbate, D. *see* **Cossidente, Antonio et al., 2003d:05177**
Mavron, V. C. *see* **Jungnickel, Dieter et al., 2003a:05033**
McDonough, T. P. *see* **Jungnickel, Dieter et al., 2003a:05033**
Pianta, Silvia *see* **Karzel, H. et al., 2003g:20114**
Zizioli, Elena *see* **Karzel, H. et al., 2003g:20114**

51Fxx Metric geometry

51F15 Reflection groups, reflection geometries [see also 20H10, 20H15; for Coxeter groups, see 20F55]

Brandman, Jeremy (*with* Fowler, James Andrew; Lins, Brian; Spitkovsky, Ilya M.; Zobin, Nahum) Convex hulls of Coxeter groups. (English summary) **2003j:51009**
Fowler, James Andrew *see* **Brandman, Jeremy et al., 2003j:51009**
Giuzzi, Luca (*with* Karzel, H.) Co-Minkowski spaces, their reflection structure and K-loops. (English summary) **2003f:51024**
Karzel, H. *see* **Giuzzi, Luca, 2003f:51024**
Lins, Brian *see* **Brandman, Jeremy et al., 2003j:51009**
McCarthy, Nicholas (*with* Ogilvie, David; Spitkovsky, Ilya M.; Zobin, Nahum) Birkhoff's theorem and convex hulls of Coxeter groups. (English summary) **2003g:51012**
McMullen, Peter (*with* Schulte, Egon) Locally unitary groups and regular polytopes. (English summary) **2003i:51014**
Ogilvie, David *see* **McCarthy, Nicholas et al., 2003g:51012**
Schulte, Egon *see* **McMullen, Peter, 2003i:51014**
Spitkovsky, Ilya M. *see* **McCarthy, Nicholas et al., 2003g:51012** *and* **Brandman, Jeremy et al., 2003j:51009**
Zobin, Nahum *see* **McCarthy, Nicholas et al., 2003g:51012** *and* **Brandman, Jeremy et al., 2003j:51009**

Items with secondary classifications in 51F15

Beardon, Alan F. (*with* Minda, David) Sphere-preserving maps in inversive geometry. (English summary) **2003j:30067**
de Dios Varela, Juan ★ Elementos geométricos de la cristalografía. (Spanish) [Geometric elements of crystallography] **2003e:20053**
Fleischmann, Peter On pointwise conjugacy of distinguished coset representatives in Coxeter groups. (English summary) **2003f:20059**
Lungu, A. P. Zamorzaev's P-symmetry and its further generalizations. (English summary) (*see* **2003g:00027**)
McMullen, Peter (*with* Schulte, Egon) The mix of a regular polytope with a face. (English summary) **2003h:52012**
Minda, David *see* **Beardon, Alan F., 2003j:30067**
Schulte, Egon *see* **McMullen, Peter, 2003h:52012**
Walter, John H. Bases of chambers of linear Coxeter groups. **2003a:20067**

51F25 Orthogonal and unitary groups [see also 20H05]

Items with secondary classifications in 51F25

Orlik, Peter (*with* Reiner, Victor; Shepler, Anne V.) The sign representation for Shephard groups. (English summary) **2003i:20062**
Reiner, Victor *see* **Orlik, Peter et al., 2003i:20062**
Shepler, Anne V. *see* **Orlik, Peter et al., 2003i:20062**

51F99 None of the above, but in this section

Dress, A. (*with* Huber, K. T.; Moulton, Vincent) Metric spaces in pure and applied mathematics. (English summary) **2003d:51011**
Gorbul'skiĭ, M. Equivariant embeddings of an N-dimensional space into a Hilbert space. (Russian. English and Russian summaries) **2003a:51015**
Huber, K. T. *see* **Dress, A. et al., 2003d:51011**
Moulton, Vincent *see* **Dress, A. et al., 2003d:51011**
Väisälä, Jussi Isometric approximation property in Euclidean spaces. (English summary) **2003f:51025**

Items with secondary classifications in 51F99

Cossidente, Antonio (*with* King, Oliver H.) Embeddings of finite classical groups over field extensions and their geometry. (English summary) **2003b:20068**
King, Oliver H. *see* **Cossidente, Antonio, 2003b:20068**

51G05 Ordered geometries (ordered incidence structures, etc.)

Kaczmarek, Jerzy Geometrical aspects of a relation ordering the field of complex numbers. (English summary) **2003e:51021**

51Hxx Topological geometry

Polster, Burkard (*with* Steinke, Günter F.) ★ Geometries on surfaces. (English summary) **2003b:51022**
Steinke, Günter F. *see* **Polster, Burkard, 2003b:51022**

51H10 Topological linear incidence structures

Gerlich, G. Stable projective planes with Riemannian metrics. (English summary) **2003i:51015**
Hähl, H. Sixteen-dimensional locally compact translation planes admitting $SU_4\mathbf{C} \cdot SU_2\mathbf{C}$ or $SU_4\mathbf{C} \cdot SL_2\mathbf{R}$ as a group of collineations. **2003b:51023**
Im, Jang-Hwan Topologies and incidence structure on $\mathbf{R}^n$-geometries. (English summary) **2003f:51026**
Immervoll, Stefan Topological and smooth unitals. (English summary) **2003e:51022**
Löwe, Harald Noncompact subgroups of the reduced stabilizer of a locally compact, connected translation plane. (English summary) **2003k:51012**

Items with secondary classifications in 51H10

Betten, Dieter (*with* Glynn, David G.) Über endliche planare Funktionen, ihre zugehörenden Schiebebenen, und ihre abgeleiteten Translationsebenen. (German summary) [On finite planar functions, their associated shift planes, and their derived translation planes] **2003e:51002**
— (*with* Riesinger, Rolf) Noncommutative line spaces derived from certain ovals of 4-dimensional translation planes. (English summary) **2003m:51003**
Glynn, David G. *see* **Betten, Dieter, 2003e:51002**
Riesinger, Rolf *see* **Betten, Dieter, 2003m:51003**

51H15 Topological nonlinear incidence structures

Steinke, Günter F. On 2-dimensional Laguerre planes of shift type. (English summary) **2003g:51013**
— 4-dimensional elation Laguerre planes admitting non-solvable automorphism groups. (English summary) **2003j:51010**

51H20 Topological geometries on manifolds [see also 57–XX]

Items with secondary classifications in 51H20

Im, Jang-Hwan Topologies and incidence structure on $\mathbf{R}^n$-geometries. (English summary) **2003f:51026**

51H25 Geometries with differentiable structure [see also 53Cxx, 53C70]

Immervoll, Stefan Isoparametric hypersurfaces and smooth generalized quadrangles. (English summary) **2003m:51018**

Items with secondary classifications in 51H25

Immervoll, Stefan Smooth generalized quadrangles and isoparametric hypersurfaces of Clifford type. (English summary) **2003i:53083**

51Jxx Incidence groups

51Kxx Distance geometry

51K05 General theory

Andalafte, Edward Z. (*with* Freese, Raymond W.) New intrinsic four point properties which characterize hyperbolic and Euclidean spaces. (English summary) **2003e:51023**
Freese, Raymond W. *see* **Andalafte, Edward Z., 2003e:51023**
Kaya, Rüstem *see* **Özcan, Münevver, 2003c:51010**
Lin, Bo (*with* Zou, Quan Ru) Some notes on Kelly's problem and William Kruskal's conjecture. (Chinese. English and Chinese summaries)
Luo, Zhao (*with* Wen, Jia Jin; Shi, Hun Nan) A class of geometric inequalities involving a k-Brocard point. (Chinese. English and Chinese summaries)
Ma, Tong Yi A class of geometric inequalities for a simplex and an interior point. (Chinese. English and Chinese summaries)

Özcan, Münevver (*with* Kaya, Rüstem) On the ratio of directed lengths in the taxicab plane and related properties. (English summary) **2003c:51010**
Rylov, Yu. A. Geometry without topology as a new conception of geometry. (English summary) **2003e:51024**
Shi, Hun Nan *see* **Luo, Zhao et al.**
So, Shing S. Recent developments in taxicab geometry. (English summary) **2003g:51014**
Wen, Jia Jin *see* **Luo, Zhao et al.**
Yang, Ding Hua Some geometric inequalities of metric addition. (Chinese. English and Chinese summaries)
Yang, Shi Guo A geometric inequality for an inscribed simplex. (Chinese. English and Chinese summaries)
Zou, Quan Ru *see* **Lin, Bo**

Items with secondary classifications in 51K05

Barequet, Gill (*with* Dickerson, Matthew T.; Drysdale, Robert L. Scot) 2-point site Voronoi diagrams. (English summary) **2003e:51034**
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51K10 Synthetic differential geometry

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51Lxx Geometric order structures [see also 53C75]

51L15 n-vertex theorems via direct methods

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51Mxx Real and complex geometry

51M04 Elementary problems in Euclidean geometries

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— (*with* Havlicek, Hans) Ecken- und Kantenhöhen im Tetraeder. (English and Croatian summaries) [Vertex and edge altitudes in a tetrahedron]
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51M05 Euclidean geometries (general) and generalizations

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Mramor Kosta, Neža *see* **Zlobec, Borut Jurčič**, **2003c:51019**
Sakmar, I. A. An unusual way to generate conic sections. Related Euclidean constructions. (English summary) **2003a:51016**
Smith, James T. Thomsen's equation. **2003e:51037**
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51M09 Elementary problems in hyperbolic and elliptic geometries

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51M10 Hyperbolic and elliptic geometries (general) and generalizations

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Fenchel, Werner (*with* Nielsen, Jakob) ★ Discontinuous groups of isometries in the hyperbolic plane. **2003k:30066**
Fjelstad, Paul (*with* Gal, Sorin G.) Two-dimensional geometries, topologies, trigonometries and physics generated by complex-type numbers. (English summary) **2003k:83009**
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51M15 Geometric constructions

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51M16 Inequalities and extremum problems {For convex problems, see 52A40.}

Radić, Mirko Some relations concerning k-chordal and k-tangential polygons. (English summary) **2003h:51022**
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He, Bin Wu *see* **Li, Xiao Yan**
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Zhang, Han Fang An extension of a geometric inequality of finite point set on a sphere in the constant curvature space. (English summary) **2003m:52010**

51M20 Polyhedra and polytopes; regular figures, division of spaces [see also 51F15]

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Bolton, Roger *see* **Morgan, Frank, 2003c:90052**
Brehm, Ulrich (*with* Datta, Basudeb; Nilakantan, Nandini) The edge-minimal polyhedral maps of Euler characteristic −8. (English summary) **2003j:52013**
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Dong, Xun[2] Alexander duality for projections of polytopes. (English summary) **2003h:52014**
Hecker, Hans-Dietrich *see* **Spillner, Andreas, 2003j:68144**
Kappraff, Jay ★ Connections. (English summary) **2003e:00020**
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51M25 Length, area and volume [see also 26B15]

Amir-Moéz, A. R. (*with* Chavoshi, J. A.) Descartes' and Hessian foliums. (English summary) **2003k:51015**
Chavoshi, J. A. *see* **Amir-Moéz, A. R., 2003k:51015**
Hsiang, W. Y. An elementary proof of the isoperimetric problem. (Chinese. English and Chinese summaries) **2003b:51030**
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Lawrencenko, Serge (*with* Negami, Seiya; Sabitov, I. Kh.) A simpler construction of volume polynomials for a polyhedron. (English summary) **2003g:52044**
Negami, Seiya *see* **Lawrencenko, Serge et al., 2003g:52044**
Ramer, Arthur Letter to the editor. (English summary) **2003b:51032**
Risteski, Ice B. (*with* Trenčevski, Kostadin G.) Volume of some closed hypersolids. (English and Macedonian summaries)
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51M30 Line geometries and their generalizations [see also 53A25]

Items with secondary classifications in 51M30

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51M35 Synthetic treatment of fundamental manifolds in projective geometries (Grassmannians, Veronesians and their generalizations) [see also 14M15]

Havlicek, Hans (*with* List, Klaus; Zanella, Corrado) On automorphisms of flag spaces. (English summary) **2003d:51017**
List, Klaus *see* **Havlicek, Hans et al., 2003d:51017**
Zanella, Corrado *see* **Havlicek, Hans et al., 2003d:51017**

51M99 None of the above, but in this section

Komjáth, Péter (*with* Schmerl, James H.) The two points theorem of Mazurkiewicz. (English summary) **2003d:51018**
Schmerl, James H. *see* **Komjáth, Péter, 2003d:51018**

Items with secondary classifications in 51M99

Atiyah, Michael (*with* Sutcliffe, Paul M.) The geometry of point particles. (English summary) **2003c:55019**
Bazzotti, Laura (*with* Dalzotto, Giorgio; Robbiano, Lorenzo) Remarks on geometric theorem proving. (English summary) (*see* **2003a:68007**)
Blake, Stephen Unification of Grassmann's progressive and regressive products using the principle of duality. (English summary) **2003e:51038**
Bouma, Timaeus A. (*with* Dorst, Leo; Pijls, H. G. J.) Geometric algebra for subspace operations. (English summary) **2003f:15038**
Bulmer, Michael Ross (*with* Fearnley-Sander, Desmond; Stokes, Tim) The kinds of truth of geometry theorems. (English summary) (*see* **2003a:68007**)
Dalzotto, Giorgio *see* **Bazzotti, Laura et al., (2003a:68007)**
Ding, Ren *see* **Xu, Chang Qin, 2003d:52015**
Dorst, Leo *see* **Bouma, Timaeus A. et al., 2003f:15038**
Fearnley-Sander, Desmond *see* **Bulmer, Michael Ross et al., (2003a:68007)**
Fleuriot, Jacques D. Nonstandard geometric proofs. (English summary) (*see* **2003a:68007**)
Kaczmarek, Jerzy Geometrical aspects of a relation ordering the field of complex numbers. (English summary) **2003e:51021**
Li, Chen[2] *see* **Tulone, Daniela et al., (2003a:68007)**
Pijls, H. G. J. *see* **Bouma, Timaeus A. et al., 2003f:15038**
Robbiano, Lorenzo *see* **Bazzotti, Laura et al., (2003a:68007)**
Stokes, Tim *see* **Bulmer, Michael Ross et al., (2003a:68007)**
Sutcliffe, Paul M. *see* **Atiyah, Michael, 2003c:55019**
Tulone, Daniela (*with* Yap, Chee; Li, Chen[2]) Randomized zero testing of radical expressions and elementary geometry theorem proving. (English summary) (*see* **2003a:68007**)
Xu, Chang Qin (*with* Ding, Ren) About 4-isosceles planar sets. (English summary) **2003d:52015**
Yap, Chee *see* **Tulone, Daniela et al., (2003a:68007)**

51Nxx Analytic and descriptive geometry

Berger, Marcel Coniques et quadriques. [Conics and quadrics]

51N05 Descriptive geometry [see also 65D17, 68U07]

Agüero Granados, M. A. *see* **Arriola, Rosario et al., (2003a:00034)**
Arriola, Rosario (*with* Ortega Riejos, Francisco A.; Agüero Granados, M. A.; Ortiz, Gema) Geometry in the design of the tiers in a Roman theater. (Spanish. Spanish summary) (*see* **2003a:00034**)
Boehm, Wolfgang (*with* Prautzsch, Hartmut) Geometric fundamentals. (*see* **2003g:65001**)
Casanova, Gaston Elliptic and hyperbolic inversions. (English summary) **2003m:51024**
— Complement on elliptic and hyperbolic inversions. (English summary) **2003m:51025**
Havlicek, Hans *see* **Weiss, Gunter[1]**
Lordick, Daniel Elementarer Zugang zu den Tangenten an die Eigenschattengrenzen krummer Flächen. [An elementary approach to the tangents for the shadow lines of curved surfaces] **2003d:51019**
— Schattengrenzen krummer Flächen—Drehflächen, Schraubrohrfläche und Meridiankreisschraubfläche. (English and Croatian summaries) [Shade lines of curves surfaces—rotational and helical circular surfaces]
Ortega Riejos, Francisco A. *see* **Arriola, Rosario et al., (2003a:00034)**
Ortiz, Gema *see* **Arriola, Rosario et al., (2003a:00034)**
Prautzsch, Hartmut *see* **Boehm, Wolfgang, (2003g:65001)**
Reynolds, Mark Andrew Four approximations for finding the golden section of a circle's circumference from the square root two rectangle. (English summary)
Schreiber, Peter Generalized descriptive geometry. (English summary) **2003k:51016**
Weiss, Gunter[1] (*with* Havlicek, Hans) Ecken- und Kantenhöhen im Tetraeder. (English and Croatian summaries) [Vertex and edge altitudes in a tetrahedron]

Items with secondary classifications in 51N05

Farin, Gerald A history of curves and surfaces in CAGD. (*see* **2003g:65001**)
— *see also* **Handbook: Computer aided geometric design, 2003g:65001**
(Hoschek, Josef) *see* **Handbook: Computer aided geometric design, 2003g:65001**
(Kim, Myung-Soo) *see* **Handbook: Computer aided geometric design, 2003g:65001**
Leopoldseder, Stefan *see* **Pottmann, Helmut, (2003g:65001)**
Müller, Kurt Peter ★ Raumgeometrie. (German. German summary) [Geometry in 3-dimensional space]
Peters, Jörg Geometric continuity. (*see* **2003g:65001**)
Pottmann, Helmut (*with* Leopoldseder, Stefan) Geometries for CAGD. (*see* **2003g:65001**)
Sabin, Malcolm Interrogation of subdivision surfaces. (*see* **2003g:65001**)

Shapiro, Vadim Solid modeling. (*see* **2003g:65001**)
Sklenáriková, Zita On the history of descriptive geometry in Austria-Hungary. (Slovak) **2003e:01023**
Sugihara, Kokichi Voronoi diagrams. (*see* **2003g:65001**)
Wiggs, Robert A. Geometry as transformation. (English summary) **2003e:00024**

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Handbook:
Computer aided geometric design ★ Handbook of computer aided geometric design. **2003g:65001**

51N10 Affine analytic geometry

Blunck, Andrea (*with* Havlicek, Hans) Radical parallelism on projective lines and non-linear models of affine spaces. (English summary) **2003m:51026**
Bogataya, S. I. (*with* Bogatyĭ, S. A.; Frolkina, O. D.) Affinity of volume-preserving mappings. (Russian. Russian summary) **2003b:51031**
Bogatyĭ, S. A. *see* **Bogataya, S. I. et al., 2003b:51031**
Frolkina, O. D. Affinity of angle-preserving mappings. (Russian. Russian summary) **2003h:51026**
— *see also* **Bogataya, S. I. et al., 2003b:51031**
Guo, Jun[1] (*with* Zhu, Xue Li) Anzahl theorems and their applications for flats in finite affine geometry. (Chinese. English and Chinese summaries)
Havlicek, Hans *see* **Blunck, Andrea, 2003m:51026**
Knop, Jadwiga About a certain generalization of the affine ratio of three points and unharmonic ratio of four points. (English summary)
Zhu, Xue Li *see* **Guo, Jun[1]**

Items with secondary classifications in 51N10

Hitzer, Eckhard M. S. Imaginary eigenvalues and complex eigenvectors explained by real geometry. (English summary) **2003d:15012**
Korchagin, A. B. (*with* Weinberg, David A.) The isotopy classification of affine quartic curves. (English summary) **2003c:14067**
Weinberg, David A. *see* **Korchagin, A. B., 2003c:14067**

51N15 Projective analytic geometry

Boskoff, Wladimir Georges (*with* Costara, Constantin) Some geometric aspects of the inclusion $\mathbb{R}^2 \subseteq \mathbb{C}^2 \subseteq \mathbb{PC}^2$. (English summary) **2003a:51017**
Costara, Constantin *see* **Boskoff, Wladimir Georges, 2003a:51017**
Georgiev, Georgi Khristov Quadratic transformations in the projective plane. (English summary) **2003d:51020**
Kaštiel, Matej The images of Dupin's cyclides in the skew-axonometry. (English summary)
King, Alastair D. (*with* Schief, W. K.) Tetrahedra, octahedra and cubo-octahedra: integrable geometry of multi-ratios. (English summary) **2003m:51027**
Knitter, Konrad (*with* Marlewski, Adam) Suites périodiques générées par des involutions et des antiinvolutions de l'espace projectif complexe à n dimensions. (English summary) [Periodic sequences generated by involutions and anti-involutions of n-dimensional complex projective space] **2003d:51021**
Korczak, Eugeniusz On some generalization of the Hirst transformation. (English summary) **2003c:51018**
Marlewski, Adam *see* **Knitter, Konrad, 2003d:51021**
Mramor Kosta, Neža *see* **Zlobec, Borut Jurčič, 2003c:51019**
Schief, W. K. *see* **King, Alastair D., 2003m:51027**
Schröcker, Hans-Peter Das Erzeugnis dreier projektiv gekoppelter Kegelschnitte. [The product of three projectively coupled conics] **2003e:51031**
Schwartz, Richard Evan Desargues theorem, dynamics, and hyperplane arrangements. (English summary) **2003e:51032**
Wu, Xiao Ping Projective transformation and involution of nondegenerate second-order curves. (Chinese. English and Chinese summaries) **2003e:51033**
Yuan, Jun Hua A necessary and sufficient condition for a projective transformation of conics to be an involution and an algebraic expression of the corresponding involution. (Chinese. English and Chinese summaries)
Zlobec, Borut Jurčič (*with* Mramor Kosta, Neža) Configurations of cycles and the Apollonius problem. (English summary) **2003c:51019**

Items with secondary classifications in 51N15

Havlicek, Hans (*with* List, Klaus; Zanella, Corrado) On automorphisms of flag spaces. (English summary) **2003d:51017**
Liang, Yan Tang Some theorems on the orthogonal perspective of two triangles. (Chinese. English and Chinese summaries) **2003c:51002**
List, Klaus *see* **Havlicek, Hans et al., 2003d:51017**
Zanella, Corrado *see* **Havlicek, Hans et al., 2003d:51017**

51N20 Euclidean analytic geometry

Barequet, Gill (*with* Dickerson, Matthew T.; Drysdale, Robert L. Scot) 2-point site Voronoi diagrams. (English summary) **2003e:51034**
Bouma, Timaeus A. From unoriented subspaces to blade operators. (English summary) **2003e:51035**
Chen, Min (*with* Shen, Lei[3]; Hou, Xiao Rong) Configuration of intersection points of two conics. (Chinese. English and Chinese summaries)
Dickerson, Matthew T. *see* **Barequet, Gill et al., 2003e:51034**
Dorst, Leo The inner products of geometric algebra. (English summary) **2003f:51028**
Drysdale, Robert L. Scot *see* **Barequet, Gill et al., 2003e:51034**
Fishburn, Peter C. (*with* Trotter, William T.) Containment orders for similar ellipses with a common center. (English summary) **2003j:51016**
Grandine, Thomas A. Geometry processing. (*see* **2003g:65001**)
Griffith, G. J. A classification of real, plane, quintic curves which exhibit pentagonal symmetry and which pass through the centre of symmetry. **2003d:51022**
Hou, Xiao Rong *see* **Chen, Min et al.**
Megyesi, Gábor Configurations of $2n-2$ quadrics in $\mathbb{R}^n$ with $3 \cdot 2^{n-1}$ common tangent lines. (English summary) **2003f:51029**
Mészáros, Ferenc Zwei Zylinderprobleme in Euklidischen Raum. (English summary) [Two cylinder problems in Euclidean space] **2003e:51036**
Ramer, Arthur Letter to the editor. (English summary) **2003b:51032**
Shen, Lei[3] *see* **Chen, Min et al.**
Trotter, William T. *see* **Fishburn, Peter C., 2003j:51016**

Items with secondary classifications in 51N20

Barneva, Reneta P. *see* **Brimkov, Valentin E., 2003e:68135**
Brimkov, Valentin E. (*with* Barneva, Reneta P.) Graceful planes and lines. (English summary) **2003e:68135**
Degen, Wendelin Cyclides. (*see* **2003g:65001**)
Derôme, Mike Laws of reflection from two or more plane mirrors in succession. (English summary) (*see* **2003b:00021**)
Gueron, Shay Two applications of the generalized Ptolemy theorem. **2003b:51027**
Havlicek, Hans *see* **Weiss, Gunter[1]**
Kimberling, Clark Conjugacies in the plane of a triangle. (English summary) **2003e:39047**
Miller, Nathaniel CDEG: computerized diagrammatic Euclidean geometry. (English summary) (*see* **2003k:03007**)
Sakmar, I. A. An unusual way to generate conic sections. Related Euclidean constructions. (English summary) **2003a:51016**
Sottile, Frank (*with* Theobald, Thorsten) Lines tangent to $2n-2$ spheres in $\mathbb{R}^n$. (English summary) **2003j:14072**
Theobald, Thorsten *see* **Sottile, Frank, 2003j:14072**
Weiss, Gunter[1] (*with* Havlicek, Hans) Ecken- und Kantenhöhen im Tetraeder. (English and Croatian summaries) [Vertex and edge altitudes in a tetrahedron]

51N25 Analytic geometry with other transformation groups

Schröcker, Hans-Peter Generatrices of rational curves. (English summary) **2003f:51030**
Stachel, Hellmuth Ivory's theorem in the Minkowski plane. (English summary) **2003a:51018**
Szirovicza, Vlasta Die Fusspunkterzeugung der zirkulären Kurven 3. Ordnung in der isotropen Ebene. (English summary) [The generation of pedal points of third-order circular curves in the isotropic plane] **2003f:51031**
Tölke, Jürgen To the isotropic generalization of Wallace lines. (English summary) **2003b:51033**
— Bemerkungen zum isotropen Analogon der Kubik von Cazamian. (English summary) [Remarks on the isotropic analogue of the cubic of Cazamian] **2003d:51023**

Items with secondary classifications in 51N25

Hlavová, Marta Two-parametric motions in the Lobatchevski plane. (English summary) **2003m:53021**

51N30 Geometry of classical groups [see also 20Gxx, 14L35]

Baylis, William E. (*with* Hadi, Shazia) Rotations in n dimensions as spherical vectors. **2003d:51024**
Hadi, Shazia *see* **Baylis, William E., 2003d:51024**
Smith, James T. Thomsen's equation. **2003e:51037**

Items with secondary classifications in 51N30

Benz, Walter Lie sphere geometry in Hilbert spaces. (English summary) **2003b:51007**

51N35 Questions of classical algebraic geometry [see also 14Nxx]

Items with secondary classifications in 51N35

De Poi, Pietro On first order congruences of lines of $\mathbb{P}^4$ with a fundamental curve. (English summary) **2003c:14058**
Gizatullin, Marat Bialgebra and geometry of plane quartics. **2003c:14059**
Korchagin, A. B. (*with* Weinberg, David A.) The isotopy classification of affine quartic curves. (English summary) **2003c:14067**
Szirovicza, Vlasta Die Fusspunkterzeugung der zirkulären Kurven 3. Ordnung in der isotropen Ebene. (English summary) [The generation of pedal points of third-order circular curves in the isotropic plane] **2003f:51031**
Weinberg, David A. *see* **Korchagin, A. B., 2003c:14067**

51N99 None of the above, but in this section

Blake, Stephen Unification of Grassmann's progressive and regressive products using the principle of duality. (English summary) **2003e:51038**
Hestenes, David *see* **Li, Hongbo et al., (2003m:68003)**
Li, Hongbo (*with* Hestenes, David; Rockwood, Alyn) Spherical conformal geometry with geometric algebra. (*see* **2003m:68003**)
Lušin, J. (*with* Rahula, Maïdo) Sections of a multidimensional cube by hyperplanes. (Estonian) (*see* **2003a:00013**)
Rahula, Maïdo *see* **Lušin, J., (2003a:00013)**
Rockwood, Alyn *see* **Li, Hongbo et al., (2003m:68003)**

Items with secondary classifications in 51N99

Granert, Oliver *see* **Rosenhahn, Bodo et al., 2003d:68242**
Hestenes, David (*with* Li, Hongbo; Rockwood, Alyn) New algebraic tools for classical geometry. (*see* **2003m:68003**)
— *see also* **Li, Hongbo et al., (2003m:68003)**
Lasenby, Joan *see* **Perwass, Christian B. U., (2003m:68003)**
Li, Hongbo (*with* Hestenes, David; Rockwood, Alyn) Generalized homogeneous coordinates for computational geometry. (*see* **2003m:68003**)

— (*with* Sommer, Gerald) Coordinate-free projective geometry for computer vision. (*see* **2003m:68003**)
— *see also* **Hestenes, David et al.**, (**2003m:68003**)
Naeve, Ambjörn (*with* Svensson, Lars Eric) Geo-MAP unification. (*see* **2003m:68003**)
Perwass, Christian B. U. (*with* Lasenby, Joan) A unified description of multiple view geometry. (*see* **2003m:68003**)
Rockwood, Alyn *see* **Hestenes, David et al.**, (**2003m:68003**) *and* **Li, Hongbo et al.**, (**2003m:68003**)
Rosenhahn, Bodo (*with* Granert, Oliver; Sommer, Gerald) Monocular pose estimation of kinematic chains. (English summary) **2003d:68242**
Sommer, Gerald *see* **Rosenhahn, Bodo et al.**, **2003d:68242** *and* **Li, Hongbo**, (**2003m:68003**)
Svensson, Lars Eric *see* **Naeve, Ambjörn**, (**2003m:68003**)

51P05 Geometry and physics (should also be assigned at least one other classification number from Sections 70–86)

Derôme, Mike Laws of reflection from two or more plane mirrors in succession. (English summary) (*see* **2003b:00021**)
Saniga, Metod Cremona transformations and the conundrum of dimensionality and signature of macro-spacetime. (English summary) **2003a:51019**

Items with secondary classifications in 51P05

Abramowicz, Marek A. (*with* Bengtsson, Ingemar; Karas, Vladimír; Rosquist, Kjell) Poincaré ball embeddings of the optical geometry. (English summary) **2003g:83076**
Ay, Nihat (*with* Tuschmann, Wilderich) Duality versus dual flatness in quantum information geometry. (English summary) **2003m:81040**
Barrett, J. F. On Carathéodory's approach to relativity and its relation to hyperbolic geometry. **2003f:83006**
Bengtsson, Ingemar *see* **Abramowicz, Marek A. et al.**, **2003g:83076**
Benz, Walter A common characterization of classical and relativistic addition. (English summary) **2003h:83005**
Chen, Jing-Ling (*with* Ungar, Abraham A.) The Bloch gyrovector. (English summary) **2003d:81023**
Doran, Chris J. L. *see* **Parker, Rachel**, **2003d:81033**
Farmitani, F. *see* **Molaei, M. R.**, **2003i:58001**
Feeman, Timothy G. ★ Portraits of the earth. (English summary) **2003j:86018**
Karas, Vladimír *see* **Abramowicz, Marek A. et al.**, **2003g:83076**
Konopelchenko, Boris G. (*with* Schief, W. K.) Reciprocal figures, graphical statics, and inversive geometry of the Schwarzian BKP hierarchy. (English summary) **2003g:37119**
Lamphere, Robert L. Solution of the direct problem of uniform circular motion in non-Euclidean geometry. **2003d:70002**
Mahoney, Michael S. Huygens and the pendulum: from device to mathematical relation. **2003e:01014**
Molaei, M. R. (*with* Farmitani, F.) Santilli isomanifolds in arbitrary dimensions. (English summary) **2003i:58001**
Parker, Rachel (*with* Doran, Chris J. L.) Analysis of one and two particle quantum systems using geometric algebra. (English summary) **2003d:81033**
Rosquist, Kjell *see* **Abramowicz, Marek A. et al.**, **2003g:83076**
Schief, W. K. *see* **Konopelchenko, Boris G.**, **2003g:37119**
Tuschmann, Wilderich *see* **Ay, Nihat**, **2003m:81040**
Ungar, Abraham A. The hyperbolic geometric structure of the density matrix for mixed state qubits. (English summary) **2003m:81049**
— *see also* **Chen, Jing-Ling**, **2003d:81023**

52–XX Convex and discrete geometry

52–01 Instructional exposition (textbooks, tutorial papers, etc.)

Items with secondary classifications in 52–01

Barvinok, A. I. ★ A course in convexity. (English summary) **2003j:52001**
(Hilton, Peter J.) *see* **Walser, Hans, 2003b:00003**
Matoušek, Jiří ★ Lectures on discrete geometry. (English summary) **2003f:52011**
(Pedersen, Jean) *see* **Walser, Hans, 2003b:00003**
Walser, Hans ★ Symmetry. (English summary) **2003b:00003**

52–02 Research exposition (monographs, survey articles)

Barvinok, A. I. ★ A course in convexity. (English summary) **2003j:52001**

Items with secondary classifications in 52–02

(Dilcher, Karl) *see* **Herman, Jiřiet al., 2003j:00006**
Herman, Jiří (*with* Kučera, Radan; Šimša, Jaromír) ★ Counting and configurations. **2003j:00006**
Jamm, F. (*with* Parlongue, D.) Les tas de sable. [Sandpiles]
Kučera, Radan *see* **Herman, Jiřiet al., 2003j:00006**
Parlongue, D. *see* **Jamm, F.**
Šimša, Jaromír *see* **Herman, Jiřiet al., 2003j:00006**

52–03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 52–03

Extremiana Aldana, José Ignacio (*with* Hernández Paricio, Luis Javier; Rivas Rodríguez, María Teresa) Polyhedra. (Spanish. English summary) **2003c:00015**
Hernández Paricio, Luis Javier *see* **Extremiana Aldana, José Ignacio et al., 2003c:00015**
Rivas Rodríguez, María Teresa *see* **Extremiana Aldana, José Ignacio et al., 2003c:00015**
Soss, Michael (*with* Toussaint, Godfried T.) Convexifying polygons in 3D: a survey. (English summary) **2003m:52004**
Toussaint, Godfried T. *see* **Soss, Michael, 2003m:52004**

52–06 Proceedings, conferences, collections, etc.

Items with secondary classifications in 52–06

(Akiyama, Jin) *see* **Special Issue: Discrete and computational geometry**
(Asano, Tetsuo) *see* **Special Issue: Discrete and computational geometry**
(Braquelaire, Achille) *see* **Discrete geometry for computer imagery, 2003m:68006**
(Erdős, Paul[1]) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Halász, Gábor) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Hull, Thomas C.) *see* **Origami[3], 2003h:00017**
(Kano, Mikio) *see* **Special Issue: Discrete and computational geometry**
(Lachaud, Jacques-Olivier) *see* **Discrete geometry for computer imagery, 2003m:68006**
(Lovász, László) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Schneider, Rolf) *see* **Conference: Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science**
(Shahrokhi, Farhad) *see* **Discrete and computational geometry and graph drawing**
(Simonovits, Miklós) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Sós, Vera T.) *see* **Paul Erdős and his mathematics, 2003h:00021**
(Stoka, Marius I.) *see* **Conference: Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science**
(Székely, László A.) *see* **Discrete and computational geometry and graph drawing**
(Vialard, Anne) *see* **Discrete geometry for computer imagery, 2003m:68006**

Items listed otherwise than by author

Asilomar, CA ★ Origami[3]. **2003h:00017**
Bordeaux ★ Discrete geometry for computer imagery. **2003m:68006**
Budapest ★ Paul Erdős and his mathematics. II. **2003h:00021**
Columbia, SC ★ Discrete and computational geometry and graph drawing.
Conference:
Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science ★ IV International Conference in "Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science". Vol. I.
— ★ IV International Conference in "Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science". Vol. II.
Discrete and computational geometry and graph drawing ★ Discrete and computational geometry and graph drawing.
Discrete geometry for computer imagery ★ Discrete geometry for computer imagery. **2003m:68006**
Lecture Notes in Computer Science ★ Discrete geometry for computer imagery. **2003m:68006**
Meeting:
Origami Science, Mathematics and Education ★ Origami[3]. **2003h:00017**
Memorial Volume:
Erdős, Paul[1] ★ Paul Erdős and his mathematics. II. **2003h:00021**
Origami[3] ★ Origami[3]. **2003h:00017**
Paul Erdős and his mathematics ★ Paul Erdős and his mathematics. II. **2003h:00021**
Special Issue:
Discrete and computational geometry ★ Special issue on discrete and computational geometry.
Tokyo ★ Special issue on discrete and computational geometry.
Tropea ★ IV International Conference in "Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science". Vol. I.
— ★ IV International Conference in "Stochastic Geometry, Convex Bodies, Empirical Measures & Applications to Engineering Science". Vol. II.

52Axx General convexity

52A01 Axiomatic and generalized convexity

Cristescu, Gabriela (*with* Lupşa, Liana) Generalised graph-related convex functions. (English summary) **2003k:52001**
Kindler, Jürgen Klee's intersection theorem for separated paved spaces. **2003a:52001**
— Separation theorems for abstract convex structures. (English summary) **2003e:52001**
Kubiś, Wiesław Separation properties of convexity spaces. (English summary) **2003i:52001**
— A sandwich theorem for convexity preserving maps. (English summary) **2003i:52002**
Lupşa, Liana *see* **Cristescu, Gabriela, 2003k:52001**

Items with secondary classifications in 52A01

Cristescu, Gabriela (*with* Lupşa, Liana) ★ Non-connected convexities and applications. (English summary) **2003g:46083**
Hou, Ji Cheng An existence theorem of equilibrium for generalized games in H-spaces. (English summary) **2003j:91034**
Lin, Lai-Jiu *see* **Yu, Zenn-Tsuen, 2003g:54040**
Llinares Ciscar, Juan Vicente Abstract convexity, some relations and applications. (English summary) **2003i:90117**
Lupşa, Liana *see* **Cristescu, Gabriela, 2003g:46083**
Nörtemann, Stefan The Hahn-Banach theorem for partially ordered totally convex, positively convex and superconvex modules. (English summary) **2003m:46009**
Pumplün, Dieter The metric completion of convex sets and modules. (English summary) **2003f:52001**
Singer, Ivan Further applications of the additive min-type coupling function. (English summary) **2003f:49071**
Yu, Zenn-Tsuen (*with* Lin, Lai-Jiu) Continuous selection and fixed point theorems. (English summary) **2003g:54040**
Zhang, Ke Wei[1] On conditions for equality of relaxations in the calculus of variations. (English summary) **2003f:49029**

52A05 Convex sets without dimension restrictions

Börger, Reinhard When can points in convex sets be separated by affine maps? (English summary) **2003e:52002**
Pumplün, Dieter The metric completion of convex sets and modules. (English summary) **2003f:52001**

Items with secondary classifications in 52A05

Aramyan, R. G. An approach to generalized Funk equations. I. (English summary) **2003d:45012**
Geschke, Stefan (*with* Kojman, Menachem) Convexity numbers of closed sets in $\mathbb{R}^n$. (English summary) **2003e:03093**
Kojman, Menachem *see* **Geschke, Stefan, 2003e:03093**
Rudelson, M. (*with* Vershynin, R.) Embedding Levy families into Banach spaces. (English summary) **2003c:46026**
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52A27 Approximation by convex sets

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Onn, Shmuel *see* **Aviran, Sharon, 2003i:52015**
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— *see also* **Vladimirov, A. A., 2003f:49036**
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Tunçel, Levent (*with* Xu, Song) On homogeneous convex cones, the Carathéodory number, and the duality mapping. (English summary) **2003c:90080**
Vladimirov, A. A. Does continuity of convex-valued maps survive under intersection? (English summary) **2003c:49032**
— (*with* Rubinov, Aleksandr M.) Dynamics of positive multiconvex relations. (English summary) **2003f:49036**
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Zheng, Shao Wei Stability for δ-strongly convex functions and almost δ-strongly convex functions. (Chinese. English and Chinese summaries)

52A55 Spherical and hyperbolic convexity

Bao, Xiliang (*with* Bonahon, Francis) Hyperideal polyhedra in hyperbolic 3-space. (English and French summaries) **2003k:52007**
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Jin, Lu[1] On the average curvature of a convex curve in a surface of nonpositive Gaussian curvature. (English summary) **2003m:53022**
Ushijima, Akira The tilt formula for generalized simplices in hyperbolic space. (English summary) **2003b:57023**

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Farouki, Rida T. (*with* Pottmann, Helmut) Exact Minkowski products of N complex disks. (English summary) **2003c:52011**
Litvinov, V. Proper lengths of unit circles in the spaces $\mathbb{R}^2_p$. (Russian) (*see* **2003b:00020**)
Pottmann, Helmut *see* **Farouki, Rida T., 2003c:52011**

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Gadzhilarov, È. K. Invertibility of splices of linear mappings. (Russian. English and Azerbaijani summaries) **2003a:52009**
Hurtado, Ferran *see* **Arkin, Esther M. et al., 2003i:52028**
Mitchell, Joseph S. B. *see* **Arkin, Esther M. et al., 2003i:52028**
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Rosa, M. V. Evaluation functions on fuzzy convexity spaces and completely FS_3 spaces. (English summary)
Sacristán, Vera *see* **Arkin, Esther M. et al., 2003i:52028**
Sethia, Saurabh *see* **Arkin, Esther M. et al., 2003i:52028**

52Bxx Polytopes and polyhedra

52B05 Combinatorial properties (number of faces, shortest paths, etc.) [see also 05Cxx]

Andrzejak, Artur (*with* Welzl, Emo) In between k-sets, j-facets, and i-faces: (i, j)-partitions. (English summary) **2003j:52006**
Bárány, Imre (*with* Pór, Attila) On 0-1 polytopes with many facets. (English summary) **2003e:52013**
Bier, Thomas (*with* Kwa, Kiam-Heong) Perfect Clar structures and 3-homogeneous simplicial complexes. (English summary) **2003j:52007**
Datta, Basudeb (*with* Nilakantan, Nandini) Equivelar polyhedra with few vertices. (English summary) **2003c:52012**
Devillers, Olivier (*with* Mourrain, Bernard; Preparata, Franco P.; Trebuchet, Philippe) Circular cylinders through four or five points in space. **2003m:52011**
Engel, Peter On the enumeration of the simple 3-polyhedra. (English summary) **2003m:52012**
Fiorini, Samuel A combinatorial study of partial order polytopes. (English summary) **2003k:52008**
Hersh, Patricia (*with* Novik, Isabella) A short simplicial h-vector and the upper bound theorem. (English summary) **2003f:52007**
Joswig, Michael (*with* Kaibel, Volker; Körner, Friederike) On the k-systems of a simple polytope. (English summary) **2003e:52014**
Kaibel, Volker *see* **Joswig, Michael et al., 2003e:52014**
Körner, Friederike *see* **Joswig, Michael et al., 2003e:52014**
Kwa, Kiam-Heong *see* **Bier, Thomas, 2003j:52007**
McMullen, Peter (*with* Schulte, Egon) The mix of a regular polytope with a face. (English summary) **2003h:52012**
Mourrain, Bernard *see* **Devillers, Olivier et al., 2003m:52011**
Nilakantan, Nandini *see* **Datta, Basudeb, 2003c:52012**
Novik, Isabella *see* **Hersh, Patricia, 2003f:52007**
Panina, G. Yu. Generalization of Ambartzumian's combinatorial formulas. (Russian. English and Russian summaries) **2003i:52011**
Pfeifle, J. Kalai's squeezed 3-spheres are polytopal. (English summary) **2003j:52008**
Pogorelov, Alekseĭ Vasil'evich On a problem of Stoker. (Russian) **2003k:52009**
Pór, Attila *see* **Bárány, Imre, 2003e:52013**
Preparata, Franco P. *see* **Devillers, Olivier et al., 2003m:52011**
Przesławski, Krzysztof A functional analytic interpretation of the number of faces of a polyhedron. **2003g:52016**
Reiner, Victor Equivariant fiber polytopes. (English summary) **2003i:52012**
Santos, Francisco On the refinements of a polyhedral subdivision. (English summary) **2003e:52015**
Schulte, Egon *see* **McMullen, Peter, 2003h:52012**
Trebuchet, Philippe *see* **Devillers, Olivier et al., 2003m:52011**
Voĭtekhovskiĭ, Yu. L. On the real crystal octahedra. (English summary) **2003h:52013**
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Fiorini, Samuel Determining the automorphism group of the linear ordering polytope. (English summary) **2003a:52011**
Pak, Igor Hook length formula and geometric combinatorics. (English summary) **2003c:05222**
Pustylnik, Gennady (*with* Sharir, Micha) The Minkowski sum of a simple polygon and a segment. (English summary) **2003m:68168**
Rada, Juan Bounds for the Randić index of catacondensed systems. (English summary)

Santos, Francisco *see* **Athanasiadis, Christos A., 2003a:52031**
Sharir, Micha *see* **Pustylnik, Gennady, 2003m:68168**
Ustimenko, V. A. (*with* Woldar, Andrew J.) Extremal properties of regular and affine generalized m-gons as tactical configurations. (English summary) **2003k:05076**
Walther, Hansjoachim Polyhedral graphs with extreme numbers of types of faces. (English summary) **2003f:05085**
Woldar, Andrew J. *see* **Ustimenko, V. A., 2003k:05076**
Zhan, Xing Zhi The sharp Rado theorem for majorizations. **2003k:26029**

52B10 Three-dimensional polytopes

Bespamyatnikh, Sergei Enumerating triangulations of convex polytopes. (English summary) **2003d:52005**
Deza, Michel-Marie Face-regular polyhedra and tilings with two combinatorial types of faces. (English summary) **2003m:52013**
— (*with* Huang, Tayuan; Lih, Ko-Wei) Central circuit coverings of octahedrites and medial polyhedra. (English and Chinese summaries) **2003f:52008**
Horňák, M. (*with* Ivančo, Jaroslav) On the number of 3-polytopes with constant face weight. (English summary) **2003c:52013**
Huang, Tayuan *see* **Deza, Michel-Marie et al., 2003f:52008**
Ivančo, Jaroslav *see* **Horňák, M., 2003c:52013**
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Makeev, V. V. Three-dimensional polytopes inscribed in and circumscribed about convex compacta. II. (Russian. Russian summary) **2003g:52017**
Martini, Horst (*with* Wenzel, Walter) Tetrahedra are not reduced. (English summary) **2003f:52009**
O'Rourke, Joseph On the development of the intersection of a plane with a polytope. (English summary) **2003k:52010**
Wenzel, Walter *see* **Martini, Horst, 2003f:52009**

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Arnol'd, V. I. Complexification of a tetrahedron, and pseudoprojective transformations. (Russian. Russian summary) **2003a:51002**
Böröczky, Károly, Jr. (*with* Fejes Tóth, Gábor) Stability of some inequalities for three-polyhedra. **2003k:52006**
Borodin, Oleg V. (*with* Woodall, Douglas R.) Cyclic colorings of 3-polytopes with large maximum face size. (English summary) **2003e:05047**
Fabrici, Igor On vertex-degree restricted subgraphs in polyhedral groups. (English summary) **2003f:05070**
Fejes Tóth, Gábor *see* **Böröczky, Károly, Jr., 2003k:52006**
Fowler, Patrick W. (*with* John, Peter E.) Dürer polyhedra: the dark side of melancholia. (English summary) **2003j:05062**
John, Peter E. *see* **Fowler, Patrick W., 2003j:05062**
Pfeifle, J. Kalai's squeezed 3-spheres are polytopal. (English summary) **2003j:52008**
Plaza, Ángel (*with* Rivara, María-Cecilia) On the adjacencies of triangular meshes based on skeleton-regular partitions. (English summary) **2003i:65020**
Rivara, María-Cecilia *see* **Plaza, Ángel, 2003i:65020**
Schlenker, Jean-Marc Convex polyhedra in Lorentzian space-forms. (English and French summaries) **2003f:53127**
Sukiasyan, G. S. Wedge representations of valuations on polytopes in $\mathbb{R}^3$. (English summary) **2003a:52015**
Suri, Subhash *see* **Zhou, Yunhong, 2003k:65017**
Tkáč, Michal (*with* Voss, Heinz-Jürgen) On k-trestles in polyhedral graphs. (English summary) **2003j:05074**
Voss, Heinz-Jürgen *see* **Tkáč, Michal, 2003j:05074**
Woodall, Douglas R. *see* **Borodin, Oleg V., 2003e:05047**
Zhou, Yunhong (*with* Suri, Subhash) Algorithms for a minimum volume enclosing simplex in three dimensions. (English summary) **2003k:65017**
Žilinskas, Antanas On the distribution of the distance between two points in a cube. (English summary) **2003m:60026**

52B11 n-dimensional polytopes

Ábrego Lerma, Bernardo Manuel (*with* Fernández-Merchant, Silvia) Convex polyhedra in $\mathbb{R}^3$ spanning $\Omega(n^{4/3})$ congruent triangles. (English summary) **2003c:52014**
Aguiar, Marcelo Infinitesimal Hopf algebras and the **cd**-index of polytopes. (English summary) **2003b:52004**
Athanasiadis, Christos A. (*with* Santos, Francisco) On the topology of the Baues poset of polyhedral subdivisions. **2003j:52009**
Bisztriczky, Tibor Separation in neighbourly 4-polytopes. (English summary) **2003m:52014**
De Loera, Jesús A. (*with* Peterson, Elisha; Su, Francis Edward) A polytopal generalization of Sperner's lemma. (English summary) **2003h:52016**
Dong, Xun[2] Alexander duality for projections of polytopes. (English summary) **2003h:52014**
Felikson, A. A. Coxeter decompositions of spherical simplexes with noncut dihedral angles. (Russian)
Fernández-Merchant, Silvia *see* **Ábrego Lerma, Bernardo Manuel, 2003c:52014**
Finbow, Wendy A. (*with* Oliveros, D.) Separation in semi-cyclic 4-polytopes. (English summary) **2003d:52006**
Gadzhilarov, È. K. Invertibility of splices of linear mappings. (Russian. English and Azerbaijani summaries) **2003a:52009**
Gluskin, E. D. (*with* Litvak, Alexander) On the asymmetry constant of a body with few vertices. (English summary) **2003c:52015**
Greco, Gabriele H. (*with* Horvath, Charles D.) Reconstruction of polytopes by convex pastings. (English summary) **2003h:52015**
Haase, Christian (*with* Ziegler, Günter M.) Examples and counterexamples for the Perles conjecture. (English summary) **2003e:52016**
Horvath, Charles D. *see* **Greco, Gabriele H., 2003h:52015**
Iwasaki, Katsunori (*with* Kenma, Atsufumi; Matsumoto, Keiji[1]) Polynomial invariants and harmonic functions related to exceptional regular polytopes. (English summary) **2003m:52015**
Karasev, R. N. On a conjecture of A. Bezdek. (English summary) **2003i:52013**
Kenma, Atsufumi *see* **Iwasaki, Katsunori et al., 2003m:52015**
Litvak, Alexander *see* **Gluskin, E. D., 2003c:52015**
Matsumoto, Keiji[1] *see* **Iwasaki, Katsunori et al., 2003m:52015**
Oliveros, D. *see* **Finbow, Wendy A., 2003d:52006**
Peterson, Elisha *see* **De Loera, Jesús A. et al., 2003h:52016**
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Proskurnikov, A. V. (*with* Romanovskiĭ, Yu. R.) On regular triangulations of nonconvex polyhedra. (Russian)
Romanovskiĭ, Yu. R. *see* **Proskurnikov, A. V.**
Sabitov, I. Kh. Algorithmic solution of the problem of the isometric realization of two-dimensional polyhedral metrics. (Russian. Russian summary) **2003b:52005**
Santos, Francisco *see* **Athanasiadis, Christos A., 2003j:52009**
Stanley, Richard P. (*with* Pitman, James W.) A polytope related to empirical distributions, plane trees, parking functions, and the associahedron. (English summary) **2003e:52017**
Su, Francis Edward *see* **De Loera, Jesús A. et al., 2003h:52016**
Ziegler, Günter M. *see* **Haase, Christian, 2003e:52016**

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Bao, Xiliang (*with* Bonahon, Francis) Hyperideal polyhedra in hyperbolic 3-space. (English and French summaries) **2003k:52007**
Bisztriczky, Tibor On sewing neighbourly polytopes. (English summary) **2003a:52010**
Bonahon, Francis *see* **Bao, Xiliang, 2003k:52007**
Chapoton, Frédéric Opérades différentielles graduées sur les simplexes et les permutoèdres. (English and French summaries) [Differential graded operads related to simplices and permutohedra] **2003g:18011**
Garrison, Anne (*with* Scott, Richard A.) Small covers of the dodecahedron and the 120-cell. (English summary) **2003h:57018**
Hu, Yi Combinatorics and quotients of toric varieties. (English summary) **2003g:52020**
Kézdy, André E. (*with* Nielsen, Mark J.; Snevily, Hunter S.) Generalized triangle inequalities in $\mathbb{R}^n$. **2003g:52014**
Leng, Gang Song Affine surface areas of curvature images for convex bodies. (Chinese. English and Chinese summaries) **2003g:52013**
Materov, E. N. The Bott formula for toric varieties. (English and Russian summaries) **2003e:14041**
Nielsen, Mark J. *see* **Kézdy, André E. et al., 2003g:52014**
Packer, Asa Symmetric conference matrices and locally largest regular crosspolytopes in cubes. (English summary) **2003g:05034**
Parks, Harold R. (*with* Wills, Dean C.) An elementary calculation of the dihedral angle of the regular n-simplex.
Schlenker, Jean-Marc (*with* Souam, Rabah) Higher Schläfli formulas and applications. (English summary) **2003k:53008**
Scott, Richard A. *see* **Garrison, Anne, 2003h:57018**
Snevily, Hunter S. *see* **Kézdy, André E. et al., 2003g:52014**
Souam, Rabah *see* **Schlenker, Jean-Marc, 2003k:53008**
Stepenshchikov, Dmitry G. *see* **Voĭtekhovskiĭ, Yu. L.**
Sukiasyan, G. S. Canonical representations of valuations on polytopes. (English summary) **2003a:52016**
Ushijima, Akira The tilt formula for generalized simplices in hyperbolic space. (English summary) **2003b:57023**
Voĭtekhovskiĭ, Yu. L. (*with* Stepenshchikov, Dmitry G.) On the symmetry of simple 12- and 13-hedra. (English summary)
Wills, Dean C. *see* **Parks, Harold R.**

52B12 Special polytopes (linear programming, centrally symmetric, etc.)

Bisztriczky, Tibor On sewing neighbourly polytopes. (English summary) **2003a:52010**
Doignon, Jean-Paul (*with* Fiorini, Samuel) Facets of the weak order polytope derived from the induced partition projection. (English summary) **2003b:52006**
Fiorini, Samuel *see* **Doignon, Jean-Paul, 2003b:52006**
Hausel, T. (*with* Makai, E., Jr.; Szűcs, András) Inscribing cubes and covering by rhombic dodecahedra via equivariant topology. (English summary) **2003f:52010**
Makai, E., Jr. *see* **Hausel, T. et al., 2003f:52010**
Raĭgorodskiĭ, A. M. The Borsuk problem for $(0, 1)$-polytopes and cross polytopes. (Russian) **2003j:52010**
Scholl, P. (*with* Schürmann, Achill; Wills, Jörg M.) Polyhedral models of Felix Klein's group. **2003i:52014**
Schürmann, Achill *see* **Scholl, P. et al., 2003i:52014**
Szűcs, András *see* **Hausel, T. et al., 2003f:52010**
Wills, Jörg M. *see* **Scholl, P. et al., 2003i:52014**

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Athanasiadis, Christos A. (*with* Santos, Francisco) Monotone paths on zonotopes and oriented matroids. (English summary) **2003a:52031**
Bendali, F. (*with* Mahjoub, Ali Ridha; Mailfert, J.) Composition of graphs and the triangle-free subgraph polytope. (English summary) **2003f:90098**
Bisztriczky, Tibor Separation in neighbourly 4-polytopes. (English summary) **2003m:52014**
Bockmayr, Alexander (*with* Eisenbrand, Friedrich) Cutting planes and the elementary closure in fixed dimension. (English summary) **2003a:90032**
Brieden, Andreas Geometric optimization problems likely not contained in APX. (English summary) **2003g:90049**
Cánovas, Lázaro (*with* Landete, Mercedes; Marín Pérez, A.) On the facets of the simple plant location packing polytope. (English summary) **2003e:90130**

Eisenbrand, Friedrich *see* **Bockmayr, Alexander**, **2003a:90032**
Fiorini, Samuel Determining the automorphism group of the linear ordering polytope. (English summary) **2003a:52011**
Gil, Mykola Ivanovich *see* **Stoyan, Yu. G. et al.**, **2003f:90045**
Landete, Mercedes *see* **Cánovas, Lázaro et al.**, **2003e:90130**
Leng, Gang Song Affine surface areas of curvature images for convex bodies. (Chinese. English and Chinese summaries) **2003g:52013**
Mahjoub, Ali Ridha *see* **Bendali, F. et al.**, **2003f:90098**
Mailfert, J. *see* **Bendali, F. et al.**, **2003f:90098**
Margot, François Pruning by isomorphism in branch-and-cut. (English summary) **2003k:90103**
Marín Pérez, A. *see* **Cánovas, Lázaro et al.**, **2003e:90130**
Mironov, A. A. Convex polyhedra in network optimization problems. (Russian. Russian summary) **2003i:90124**
Okazaki, Mitsutaka *see* **Sekitani, Kazuyuki**, (**2003a:90002**)
Packer, Asa Symmetric conference matrices and locally largest regular crosspolytopes in cubes. (English summary) **2003g:05034**
Pfeifle, J. Kalai's squeezed 3-spheres are polytopal. (English summary) **2003j:52008**
Reiner, Victor Equivariant fiber polytopes. (English summary) **2003i:52012**
Romanova, T. E. *see* **Stoyan, Yu. G. et al.**, **2003f:90045**
Santos, Francisco On the refinements of a polyhedral subdivision. (English summary) **2003e:52015**
— *see also* **Athanasiadis, Christos A.**, **2003a:52031**
Scheithauer, Guntram *see* **Stoyan, Yu. G. et al.**, **2003f:90045**
Sekitani, Kazuyuki (*with* Okazaki, Mitsutaka) Optimizing the largest eigenvalue of positive matrices having their rows belonging to polytopes. (*see* **2003a:90002**)
Stoyan, Yu. G. (*with* Terno, Johannes; Gil, Mykola Ivanovich; Romanova, T. E.; Scheithauer, Guntram) Construction of a Φ-function for two convex polytopes. (English summary) **2003f:90045**
Terno, Johannes *see* **Stoyan, Yu. G. et al.**, **2003f:90045**

52B15 Symmetry properties of polytopes

Fiorini, Samuel Determining the automorphism group of the linear ordering polytope. (English summary) **2003a:52011**
Gévay, Gabor On perfect 4-polytopes. (English summary) **2003g:52018**
Litvin, D. B. (*with* Wadhawan, V. K.) Latent symmetry. (English summary) **2003c:52016**
Martini, Horst *see* **Weissbach, Bernulf**, **2003e:52018**
Stepenshchikov, Dmitry G. *see* **Voĭtekhovskiĭ, Yu. L.**, **2003d:52007**
Voĭtekhovskiĭ, Yu. L. (*with* Stepenshchikov, Dmitry G.) On the symmetry of 9- and 10-hedra. (English summary) **2003d:52007**
Wadhawan, V. K. *see* **Litvin, D. B.**, **2003c:52016**
Weissbach, Bernulf (*with* Martini, Horst) On the chiral Archimedean solids. (English summary) **2003e:52018**

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Al-Jubouri, Neda'a K. Torsion-free subgroups of the dodecahedron group. (English summary) **2003g:51011**
Jablan, Slavik Vlado ★ Symmetry, ornament and modularity. (English summary) **2003m:20067**
Margot, François Pruning by isomorphism in branch-and-cut. (English summary) **2003k:90103**
McMullen, Peter (*with* Schulte, Egon) Locally unitary groups and regular polytopes. (English summary) **2003i:51014**
Messer, Peter W. Closed-form expressions for uniform polyhedra and their duals. (English summary) **2003f:51027**
Reams, Robert (*with* Waldron, Shayne) Isometric tight frames. (English summary) **2003d:42060**
Schulte, Egon *see* **McMullen, Peter**, **2003i:51014**
Waldron, Shayne *see* **Reams, Robert**, **2003d:42060**

52B20 Lattice polytopes (including relations with commutative algebra and algebraic geometry) [see also 06A11, 13F20, 13Hxx]

Ando, Kazutoshi K-submodular functions and convexity of their Lovász extension. (English summary) **2003c:52017**
Chen, Beifang Lattice points, Dedekind sums, and Ehrhart polynomials of lattice polyhedra. (English summary) **2003g:52019**
Choi, Man-Duen (*with* Lam, T. Y.; Reznick, B.) Lattice polytopes with distinct pair-sums. (English summary) **2003e:52019**
Hibi, Takayuki *see* **Ohsugi, Hidefumi**, **2003a:52012**
Hu, Yi Combinatorics and quotients of toric varieties. (English summary) **2003g:52020**
Kononenko, P. G. Affine types of L-polyhedra for five-dimensional lattices. (Russian. Russian summary) **2003g:52021**
Kreuzer, Maximilian (*with* Skarke, Harald) Complete classification of reflexive polyhedra in four dimensions. (English summary) **2003e:52020**
Lam, T. Y. *see* **Choi, Man-Duen et al.**, **2003e:52019**
Mağden, A. *see* **Salimov, A. A.**, **2003j:52011**
Marra, Vincenzo (*with* Mundici, Daniele) Combinatorial fans, lattice-ordered groups, and their neighbours: a short excursion. (English summary) **2003e:52021**
McDonald, John Christopher Fractional power series solutions for systems of equations. (English summary) **2003h:52017**
Mundici, Daniele *see* **Marra, Vincenzo**, **2003e:52021**
Ohsugi, Hidefumi (*with* Hibi, Takayuki) Unimodular triangulations and coverings of configurations arising from root systems. (English summary) **2003a:52012**
— Toric ideals and an infinite family of normal $(0, 1)$-polytopes without unimodular regular triangulations. (English summary) **2003d:52008**
Reznick, B. *see* **Choi, Man-Duen et al.**, **2003e:52019**
Salimov, A. A. (*with* Mağden, A.) Horizontal lifts of tensor fields of type $(1, 1)$. (English and Azerbaijani summaries) **2003j:52011**
Skarke, Harald *see* **Kreuzer, Maximilian**, **2003e:52020**

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52B22 Shellability

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Alesker, Semyon Classification results on valuations on convex sets. (English summary) **2003e:52023**
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52B55 Computational aspects related to convexity {For computational geometry and algorithms, see 68Q25, 68U05; for numerical algorithms, see 65Yxx.} [see also 68Uxx]

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52B60 Isoperimetric problems for polytopes

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52B70 Polyhedral manifolds

Aharoni, Ron (*with* Chudnovsky, Maria; Kotlov, Andreĭ) Triangulated spheres and colored cliques. (English summary) **2003g:52029**
Brehm, Ulrich (*with* Datta, Basudeb; Nilakantan, Nandini) The edge-minimal polyhedral maps of Euler characteristic −8. (English summary) **2003j:52013**
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Krejčí, Pavel (*with* Vladimirov, A. A.) Lipschitz continuity of polyhedral Skorokhod maps. (English summary) **2003g:47124**
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52B99 None of the above, but in this section

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Ziegler, Günter M. Generalized Kneser coloring theorems with combinatorial proofs. (English summary) **2003d:05088**

52Cxx Discrete geometry

Matoušek, Jiří ★ Lectures on discrete geometry. (English summary) **2003f:52011**

52C05 Lattices and convex bodies in 2 dimensions [see also 11H06, 11H31, 11P21]

Hernández Cifre, María A. Area-inradius and diameter-inradius relations for covering plane sets. **2003d:52013**
Li, Jian Guo *see* **Li, Ying Zi**
Li, Ying Zi (*with* Li, Jian Guo) The weights of edges in arrangements of open semicircles. (Chinese. English and Chinese summaries)
Milenkovic, Victor J. Densest translational lattice packing of non-convex polygons. (English summary) **2003e:52025**
Su, Zhan Jun (*with* Wang, Xin Ke; Tian, Hui Zhu) On Stein's conjecture. (Chinese. English and Chinese summaries)
Tian, Hui Zhu *see* **Su, Zhan Jun et al.**
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Apostol, Tom M. Lattice points. **2003k:11151**
Beck, Matthias (*with* Robins, Sinai) Explicit and efficient formulas for the lattice point count in rational polygons using Dedekind-Rademacher sums. (English summary) **2003d:11150**
Bespamyatnikh, Sergei Packing two disks in a polygon. (English summary) **2003c:68229**
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Jackson, Stephen Craig (*with* Mauldin, R. Daniel) Sets meeting isometric copies of the lattice $\mathbf{Z}^2$ in exactly one point. (English summary) **2003k:11113**
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Schnell, Uwe (*with* Schürmann, Achill) A criterion for finite lattice coverings. (English summary) **2003m:52022**
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52C07 Lattices and convex bodies in n dimensions [see also 11H06, 11H31, 11P21]

Chapoton, Frédéric (*with* Fomin, Sergey; Zelevinsky, Andrei) Polytopal realizations of generalized associahedra. (English summary) **2003j:52014**
Engel, Peter On the determination of a lattice basis of facet vectors. (English summary) **2003m:52020**
Fomin, Sergey *see* **Chapoton, Frédéric et al., 2003j:52014**
Uhrin, B. A minimization problem in function spaces. (English summary) **2003d:52014**
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Balister, P. N. (*with* Bollobás, Béla; Quas, Anthony) Entropy along convex shapes, random tilings and shifts of finite type. (English summary) **2003j:37023**
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Bollobás, Béla *see* **Balister, P. N. et al., 2003j:37023**
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Hajdu, András *see* **Fazekas, Attila et al., 2003f:68145**
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Harada, Masaaki Extremal odd unimodular lattices in dimensions 44, 46 and 47. (English summary) **2003k:11112**
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Kononenko, P. G. Affine types of L-polyhedra for five-dimensional lattices. (Russian. Russian summary) **2003g:52021**
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52C10 Erdős problems and related topics of discrete geometry [see also 11Hxx]

Agarwal, Pankaj K. (*with* Sharir, Micha) The number of congruent simplices in a point set. (English summary) **2003i:52019**
Bezdek, A. On unit circles which avoid all but two points of a given point-set. (English summary) **2003a:52021**
Blokhuis, Aart (*with* Seress, Ákos) The number of directions determined by points in the three-dimensional Euclidean space. (English summary) **2003m:52021**
Ding, Ren *see* **Xu, Chang Qin**, **2003d:52015**
Fishburn, Peter C. A remarkable eight-point planar configuration. (English summary) **2003g:52030**
Gates, John The mean number of extreme lines in a convex hull of lines. (English summary) **2003g:52031**
Gyárfás, András Erdős problems on irregularities of line sizes and point degrees. (English summary) **2003i:52020**
Ismailescu, Dan Restricted point configurations with many collinear k-tuplets. (English summary) **2003k:52013**
Mubayi, Dhruv Intersecting curves in the plane. (English summary) **2003i:52021**
Overmars, Mark H. Finding sets of points without empty convex 6-gons. (English summary) **2003i:52022**
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Solymosi, József (*with* Tardos, Gábor; Tóth, Csaba D.) The k most frequent distances in the plane. (English summary) **2003j:52015**
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Tardos, Gábor *see* **Solymosi, József et al.**, **2003j:52015**
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Xu, Chang Qin (*with* Ding, Ren) About 4-isosceles planar sets. (English summary) **2003d:52015**
Yang, Lu (*with* Zhang, Jing-Zhong; Zhang, Wei Nian) On number of circles intersected by a line. (English summary) **2003d:52016**
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Radziszowski, Stanisław P. *see* **Beygelzimer, Alina**, **2003j:52022**
(Simonovits, Miklós) *see* **Paul Erdős and his mathematics**, **2003h:00021**
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52C15 Packing and covering in 2 dimensions [see also 05B40, 11H31]

Blind, Gerd (*with* Blind, Roswitha) Packings of unequal circles in a convex set. (English summary) **2003c:52022**
Blind, Roswitha *see* **Blind, Gerd**, **2003c:52022**
Böröczky, Károly, Jr. Discrete point sets in the hyperbolic plane. (English summary) **2003g:52032**
Ding, Ren *see* **Xu, Chang Qin**, **2003k:52015**
Fowler, Patrick W. (*with* Tarnai, T.; Gáspár, Zs.) From circle packing to covering on a sphere with antipodal constraints. (English summary) **2003g:52033**
Friedman, Erich Squares touching a constant number of other squares. (English summary)
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Harborth, Heiko (*with* Koch, M.; Szabó, László[2]) Newton numbers for overlapping circular discs. (English summary) **2003d:52017**
Heppes, A. Packing of rounded domains on a sphere of constant curvature. (English summary) **2003f:52012**
Januszewski, Janusz Translative covering by sequences of homothetic copies. (English summary) **2003b:52009**
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— Covering by sequences of squares. (English summary) **2003f:52013**
Kearney, Michael J. (*with* Shiu, Peter) Efficient packing of unit squares in a square. (English summary) **2003h:52021**
Kemnitz, Arnfried (*with* Möller, Meinhard; Wojzischke, Danja) Bounds for the Newton number in the plane. (English summary) **2003d:52018**
Kim, Seon-Hong A minimax problem about unit vectors in the plane. (English summary) **2003c:52023**
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Krauth, W. Disks on a sphere and two-dimensional glasses. (English summary) **2003g:52034**
Locatelli, Marco (*with* Raber, Ulrich) Packing equal circles in a square: a deterministic global optimization approach. (English summary) **2003e:52026**
Möller, Meinhard *see* **Kemnitz, Arnfried et al.**, **2003d:52018**
Peretz, Ronen Iterations of concave maps, the Perron-Frobenius theory, and applications to circle packings. (English summary) **2003j:52017**
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Schnell, Uwe (*with* Schürmann, Achill) A criterion for finite lattice coverings. (English summary) **2003m:52022**
Schürmann, Achill On extremal finite packings. (English summary) **2003f:52014**
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Wills, Jörg M. On an inequality in Minkowski geometry. (English summary) **2003k:52014**
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Xu, Chang Qin (*with* Ding, Ren) The lower bound of the number of non-overlapping triangles. (English summary) **2003k:52015**

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Casado, L. G. (*with* García-Fernández, I.; Szabó, P. G.; Csendes, T.) Packing equal circles in a square. II. New results for up to 100 circles using the TAMSASS-PECS algorithm. (English summary) **2003f:05028**
— *see also* **Szabó, P. G. et al.**, **2003f:05029**
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Csendes, T. *see* **Casado, L. G. et al.**, **2003f:05028** *and* **Szabó, P. G. et al.**, **2003f:05029**
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Jiang, Yue Ping (*with* Chu, Yu Ming) Geometric Jørgensen's inequalities for Möbius groups in higher dimensions. (Chinese. English and Chinese summaries) **2003k:30069**
Kusner, Robert B. On thickness and packing density for knots and links. (English summary) **2003m:57017**
Lassak, Marek Affine-regular hexagons of extreme areas inscribed in a centrally symmetric convex body. (English summary) **2003m:52003**
Leibon, Gregory Random Delaunay triangulations and metric uniformization. **2003d:57038**
Morin, Pat *see* **Bose, Prosenjit et al.**, (**2003e:68005**)
Pinchasi, Rom Gallai-Sylvester theorem for pairwise intersecting unit circles. (English summary) **2003k:52021**
Rhee, WanSoo T. Packing random rectangles of given volume. (English summary) **2003i:52007**
Szabó, P. G. (*with* Csendes, T.; Casado, L. G.; García-Fernández, I.) Packing equal circles in a square. I. Problem setting and bounds for optimal solutions. (English summary) **2003f:05029**
— *see also* **Casado, L. G. et al.**, **2003f:05028**
Talata, István On minimum kissing numbers of finite translative packings of a convex body. (English summary) **2003j:52018**
Vigneron, Antoine *see* **Bose, Prosenjit et al.**, (**2003e:68005**)
Wetzel, John E. Rectangles in rectangles. **2003d:51016**
Williams, G. Brock Earthquakes and circle packings. (English summary) **2003e:57032**
Zong, Chuanming From deep holes to free planes. (English summary) **2003h:11075**
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52C17 Packing and covering in n dimensions [see also 05B40, 11H31]

Aharoni, Ron (*with* Holzman, Ron; Krivelevich, Michael; Meshulam, Roy) Fractional planks. (English summary) **2003c:52024**
Bezdek, Károly Improving Rogers' upper bound for the density of unit ball packings via estimating the surface area of Voronoi cells from below in Euclidean d-space for all $d \geq 8$. (English summary) **2003c:52025**
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Kirat, Ibrahim (*with* Lau, Ka-Sing) Classification of integral expanding matrices and self-affine tiles. (English summary) **2003c:52030**
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52C22 Tilings in n dimensions [see also 05B45, 51M20]

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Delgado Friedrichs, O. (*with* Plévert, J.; O'Keeffe, M.) A simple isohedral tiling of three-dimensional space by infinite tiles and with symmetry $Ia\bar{3}d$. (English summary) **2003c:52031**
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Komatsu, Kazushi On aperiodic tilings by the projection method.
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52C23 Quasicrystals, aperiodic tilings

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53–XX Differential geometry {For differential topology, see 57Rxx. For foundational questions of differentiable manifolds, see 58Axx.}

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53Axx Classical differential geometry

53A04 Curves in Euclidean space

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53B50 Applications to physics

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53Cxx Global differential geometry [see also 51H25, 58–XX; for related bundle theory, see 55Rxx, 57Rxx]

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53C07 Special connections and metrics on vector bundles (Hermite-Einstein-Yang-Mills) [see also 32Q20]

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53C17 Sub-Riemannian geometry

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53D20 Momentum maps; symplectic reduction

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53D22 Canonical transformations

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53D25 Geodesic flows

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53D30 Symplectic structures of moduli spaces

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53D35 Global theory of symplectic and contact manifolds [see also 57Rxx]

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53D40 Floer homology and cohomology, symplectic aspects

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53D45 Gromov-Witten invariants, quantum cohomology, Frobenius manifolds [see also 14N35]

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53D50 Geometric quantization

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53D55 Deformation quantization, star products

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53D99 None of the above, but in this section

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53Z05 Applications to physics

54–XX General topology {For the topology of manifolds of all dimensions, see 57Nxx.}

54–01 Instructional exposition (textbooks, tutorial papers, etc.)

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54–03 Historical (must also be assigned at least one classification number from Section 01)

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54–06 Proceedings, conferences, collections, etc.

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(Comfort, W. W.) *see* **Essays: General topology**
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Conference on Topology and its Applications ★ Proceedings of the International Conference on Topology and its Applications.
Meeting on Continuum Theory ★ Proceedings of the First International Meeting on Continuum Theory.
Topological Seminar ★ Proceedings of the Lviv Topological Seminar.
Topology and Dynamical Systems Conference ★ Proceedings of the Spring Topology and Dynamical Systems Conference.
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54Axx Generalities

54A05 Topological spaces and generalizations (closure spaces, etc.)

Abdel-Sattar, M. A. *see* **Ramadan, A. A. et al.**
Cao, Ji Ling (*with* Ganster, Maximilian; Reilly, Ivan L.) Recent progress in the theory of generalized closed sets. (English summary) **2003d:54002**
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— Remarks on γ-quasi-open sets. (English summary) **2003e:54002**
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Fang, Jin Ming (*with* Yue, Yue Li; Liu, Gang^2) Completely induced bitopological space. (Chinese. English and Chinese summaries)
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— (*with* Jafari, Saeid; Navalagi, Govindappa) On semi-g-regular and semi-g-normal spaces. (English summary) **2003c:54002**
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Ramadan, A. A. (*with* Abdel-Sattar, M. A.; Kim, Yong Chan^2) Some properties of smooth ideals. (English summary)
Reilly, Ivan L. Generalized closed sets: a survey of recent work. (English summary) (*see* **2003c:00020**)
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Diers, Yves Topological geometrical categories. (English summary) **2003e:18005**
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54A10 Several topologies on one set (change of topology, comparison of topologies, lattices of topologies)

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54A15 Syntopogeneous structures

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54A20 Convergence in general topology (sequences, filters, limits, convergence spaces, etc.)

Baker, Joni (*with* Kunen, Kenneth) Matrices and ultrafilters.
Baran, Mehmet Regular filter convergence spaces. (English summary) **2003c:54003**
Bonanzinga, M. (*with* Cammaroto, Filippo[1]) More on cleavability over $T_{i,p}$ spaces. (English summary) **2003d:54007**
Cammaroto, Filippo[1] *see* **Bonanzinga, M., 2003d:54007**
Chiriac, Ion Singletons in the set "germ". (English summary) **2003c:54004**
Costantini, Camillo (*with* Priola, Enrico) Filters, nets and cofinal types. (English summary) **2003e:54004**
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Jäger, Gunther A category of L-fuzzy convergence spaces. (English summary) **2003b:54007**
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Ostrovskiĭ, M. I. Weak* sequential closures in Banach space theory and their applications. (English summary) **2003g:46015**
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54A25 Cardinality properties (cardinal functions and inequalities, discrete subsets) [see also 03Exx] {For ultrafilters, see 54D80.}

Alas, Ofelia T. (*with* Kočinac, Ljubiša D.) More cardinal inequalities on Urysohn spaces. (English summary) **2003f:54006**
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Cammaroto, Filippo[1] *see* **Bonanzinga, M., 2003d:54007**
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Jordan, Francis Generalizing the Blumberg theorem. (English summary) **2003g:26003**
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54A35 Consistency and independence results [see also 03E35]

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Eisworth, Todd On perfect pre-images of ω_1. (English summary) **2003g:54005**
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54Bxx Basic constructions

54B05 Subspaces

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54C56 Shape theory [see also 55P55, 57N25]

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54C70 Entropy

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54Dxx Fairly general properties

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54D35 Extensions of spaces (compactifications, supercompactifications, completions, etc.)

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54D40 Remainders

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54Exx Spaces with richer structures

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54E05 Proximity structures and generalizations

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54E18 p-spaces, M-spaces, σ-spaces, etc.

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54E20 Stratifiable spaces, cosmic spaces, etc.

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54E25 Semimetric spaces

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54E35 Metric spaces, metrizability

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54E52 Baire category, Baire spaces

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54Fxx Special properties

54F05 Linearly ordered topological spaces, generalized ordered spaces, and partially ordered spaces [see also 06B30, 06F30]

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54F15 Continua and generalizations

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— (*with* Prajs, Janusz R.) Several old and new problems in continuum theory. (English summary) **2003g:54079**
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— (*with* Charatonik, Włodzimierz J.; Prajs, Janusz R.) Gate continua, absolute terminal continua and absolute retracts. (English summary) **2003f:54073**
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— (*with* Covarrubias, Patricia Pellicer) On covering mappings on solenoids. (English summary) **2003c:54065**
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54F35 Higher-dimensional local connectedness [see also 55Mxx, 55Nxx]

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54F50 Spaces of dimension ≤ 1; curves, dendrites [see also 26A03]

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54F55 Unicoherence, multicoherence

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54F65 Topological characterizations of particular spaces

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54Gxx Peculiar spaces

54G05 Extremally disconnected spaces, F-spaces, etc.

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54G12 Scattered spaces

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54G15 Pathological spaces

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54Hxx Connections with other structures, applications

54H05 Descriptive set theory (topological aspects of Borel, analytic, projective, etc. sets) [see also 03E15, 26A21, 28A05]

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54H11 Topological groups [see also 22A05]

Al-Hindawe, A. L. *see* **Al-Kutaibi, S. H.**, **2003e:54039**
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Banakh, Taras Topologies on groups determined by sequences: answers to several questions of I. Protasov and E. Zelenyuk. (English and Russian summaries) **2003j:22001**
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54H12 Topological lattices, etc. [see also 06B30, 06F30]

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54H13 Topological fields, rings, etc. [see also 12Jxx] {For algebraic aspects, see 13Jxx, 16W80.}

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Zhitomirskiĭ, G. I. Topologically complete representations of inverse semigroups. (English summary) **2003h:20113**

54H15 Transformation groups and semigroups [see also 20M20, 22–XX, 57Sxx]

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54H20 Topological dynamics [see also 28Dxx, 37Bxx]

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55M30 Ljusternik-Schnirelman (Lyusternik-Shnirel′man) category of a space

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55M35 Finite groups of transformations (including Smith theory) [see also 57S17]

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55M99 None of the above, but in this section

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55Nxx Homology and cohomology theories [see also 57Txx]

55N05 Čech types

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55N07 Steenrod-Sitnikov homologies

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55N10 Singular theory

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55N15 K-theory [see also 19Lxx] {For algebraic K-theory, see 18F25, 19–XX.}

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55N20 Generalized (extraordinary) homology and cohomology theories

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Brunetti, Maurizio Morava K-theories of p-groups with cyclic maximal subgroups and other related groups. (English summary) **2003a:55007**

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Minami, Norihiko From $K(n+1)^*(X)$ to $K(n)^*(X)$. (English summary) **2003a:55009**
Nishimoto, Tetsu *see* **Mimura, Mamoru, 2003b:55005**
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Snaith, Victor P. The upper triangular group and operations in algebraic K-theory. **2003h:55014**

55N22 Bordism and cobordism theories, formal group laws [see also 14L05, 19L41, 57R75, 57R77, 57R85, 57R90]

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Merkur'ev, A. S. Algebraic oriented cohomology theories. (English summary) **2003j:14023**
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55N25 Homology with local coefficients, equivariant cohomology

Baum, P. (*with* Schneider, Peter[1]) Equivariant-bivariant Chern character for profinite groups. (English summary) **2003h:55005**
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Cegarra, Antonio M. (*with* García-Calcines, J. M.; Ortega, Jose A.) Cohomology of groups with operators. (English summary) **2003c:20064**
Cogolludo Agustín, José Ignacio Topological invariants of the complement to arrangements of rational plane curves. (English summary) **2003k:32037**
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Lück, Wolfgang L^2-invariants of regular coverings of compact manifolds and CW-complexes. **2003a:58049**
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55N30 Sheaf cohomology [see also 18F20, 32C35, 32L10]

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55N33 Intersection homology and cohomology

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55N34 Elliptic cohomology

Ando, Matthew (*with* Basterra, Maria) The Witten genus and equivariant elliptic cohomology. (English summary) **2003g:55008**
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Kitchloo, Nitu (*with* Laures, Gerd) Real structures and Morava K-theories. (English summary) **2003i:55005**
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55N35 Other homology theories

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55Pxx Homotopy theory {For simple homotopy type, see 57Q10.}

55P05 Homotopy extension properties, cofibrations

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55P15 Classification of homotopy type

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55P30 Eckmann-Hilton duality

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55P35 Loop spaces

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55P40 Suspensions

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55P42 Stable homotopy theory, spectra

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55P43 Spectra with additional structure (E_∞, A_∞, ring spectra, etc.)

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55P45 H-spaces and duals

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55P62 Rational homotopy theory

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55P65 Homotopy functors

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55P91 Equivariant homotopy theory [see also 19L47]

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55P92 Relations between equivariant and nonequivariant homotopy theory

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55Qxx Homotopy groups

55Q05 Homotopy groups, general; sets of homotopy classes

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55Q07 Shape groups

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55Q10 Stable homotopy groups

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55Q15 Whitehead products and generalizations

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55Q20 Homotopy groups of wedges, joins, and simple spaces

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55Q25 Hopf invariants

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55Q35 Operations in homotopy groups

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55Q40 Homotopy groups of spheres

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55Q45 Stable homotopy of spheres

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55Q50 J-morphism [see also 19L20]

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55Q51 v_n-periodicity

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55Q52 Homotopy groups of special spaces

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55Q55 Cohomotopy groups

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55Q70 Homotopy groups of special types [see also 55N05, 55N07]

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55Q91 Equivariant homotopy groups [see also 19L47]

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55Q99 None of the above, but in this section

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55Rxx Fiber spaces and bundles [see also 18F15, 32Lxx, 46M20, 57R20, 57R22, 57R25]

55R05 Fiber spaces

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55R10 Fiber bundles

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55R12 Transfer

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Minami, Norihiko Some mathematical influences of Stewart Priddy. (English summary) **2003b:55010**
(Priddy, Stewart) *see* **Minami, Norihiko, 2003b:55010**
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55R15 Classification

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55R20 Spectral sequences and homology of fiber spaces [see also 55Txx]

Castellana, Natàlia (*with* Kitchloo, Nitu) A homotopy construction of the adjoint representation for Lie groups. (English summary) **2003f:55020**
Kitchloo, Nitu *see* **Castellana, Natàlia, 2003f:55020**
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Berrick, A. J. (*with* Davydov, Alekseĭ A.) Splitting of Gysin extensions. (English summary) **2003a:55021**
Cho, Yong Seung The cohomology ring of S^2-fibrations. (English summary) **2003j:55013**
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55R25 Sphere bundles and vector bundles

Anderson, Laura (*with* Davis, James Frederic) Mod 2 cohomology of combinatorial Grassmannians. (English summary) **2003g:55023**
Bechtluft-Sachs, Stefan (*with* Hien, Marco) The local defect index up to finite ambiguity. (English summary) **2003d:55012**
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He, Hui Xia (*with* Tang, Zi Zhou) Some bundles over nonnegatively curved manifolds. (Chinese. English and Chinese summaries) **2003b:53037**
(Rigas, Alcibiades) *see* **Barros, Tomas Edson, 2003b:57039**
Tang, Zi Zhou *see* **He, Hui Xia, 2003b:53037**

55R35 Classifying spaces of groups and H-spaces

Broto, Carlos (*with* Kitchloo, Nitu) Classifying spaces of Kac-Moody groups. (English summary) **2003m:55020**
Felali, Khaled S. Primitive classes of the K-homology of BU. (English summary) **2003e:55017**
Feldman, David V. (*with* Wilce, Alexander) Degenerate fibres in the Stone-Čech compactification of the universal bundle of a finite group. (English summary) **2003f:55021**
Grodal, Jesper Higher limits via subgroup complexes. **2003g:55025**
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Lee, Hyang-Sook Stable splittings of classifying spaces of 2-toral compact Lie groups. (English summary) **2003j:55014**
Levi, Ran (*with* Oliver, Robert) Construction of 2-local finite groups of a type studied by Solomon and Benson. (English summary) **2003k:55016**
Martino, John (*with* Priddy, Stewart) Minami-Webb type decompositions for compact Lie groups. **2003c:55017**
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Notbohm, Dietrich On the 2-compact group DI(4). (English summary) **2003k:55018**
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— (*with* Lin, James P.) Cohomology rings of 3-local finite H-spaces. (English summary) **2003d:55022**
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— *see also* **Hemmi, Yutaka, 2003d:55022**
Minami, Norihiko Some mathematical influences of Stewart Priddy. (English summary) **2003b:55010**
Mostovoy, Jacob Short ropes and long knots. (English summary) **2003f:57021**
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(Priddy, Stewart) *see* **Minami, Norihiko, 2003b:55010**
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55R37 Maps between classifying spaces

Berrick, A. J. (*with* Kropholler, Peter H.) Groups with infinite homology. **2003c:55018**
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Grodal, Jesper Higher limits via subgroup complexes. **2003g:55025**
Levi, Ran (*with* Oliver, Robert) Construction of 2-local finite groups of a type studied by Solomon and Benson. (English summary) **2003k:55016**
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55R40 Homology of classifying spaces, characteristic classes [see also 57Txx, 57R20]

Freed, Daniel S. Classical Chern-Simons theory. II. **2003f:55022**
Green, David John (*with* Hunton, John Robert; Schuster, B.) Chromatic characteristic classes in ordinary group cohomology. (English summary) **2003m:55021**
Holla, Yogish I. (*with* Nitsure, Nitin) Topology of quadric bundles. **2003f:55023**
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Notbohm, Dietrich Homology decompositions for classifying spaces of finite groups associated to modular representations. (English summary) **2003a:55022**
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55R45 Homology and homotopy of BO and BU; Bott periodicity

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Kandelaki, Tamaz *see* **Inassaridze, Hvedri, 2003k:19001**

55R50 Stable classes of vector space bundles, K-theory [see also 19Lxx] {For algebraic K-theory, see 18F25, 19–XX.}

Al-Shehri, Noura On obstructions of orientability of vector bundles. (English summary)
Kobayashi, Teiichi (*with* Komatsu, Kazushi) Extendibility and stable extendibility of the square of the normal bundle associated to an immersion of the real projective space. (English summary) **2003m:55022**
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55R55 Fiberings with singularities

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Bogomolov, Fedor (*with* Katzarkov, Ludmil; Pantev, Tony) Hyperelliptic Szpiro inequality. (English summary) **2003k:57030**
Huang, Hong Branched coverings and nonzero degree maps between Seifert manifolds. (English summary) **2003d:57004**
Katzarkov, Ludmil *see* **Bogomolov, Fedor et al., 2003k:57030**
Pantev, Tony *see* **Bogomolov, Fedor et al., 2003k:57030**

55R65 Generalizations of fiber spaces and bundles

Caicedo, M. I. (*with* Martín, Isbelia; Restuccia, A.) Gerbes and duality. (English summary) **2003i:55017**
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Kim, Yongkuk *see* **Daverman, Robert J., 2003i:55018**
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Reis, Nuno B. B. *see* **Gawędzki, Krzysztof, 2003m:81222**
Varela Borda, Januario *see* **Bautista, Serafín, 2003d:18005**
Vermeulen, J. J. C. *see* **Hardie, Keith A. et al., 2003g:55013**
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55R70 Fibrewise topology

Items with secondary classifications in 55R70

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55R80 Discriminantal varieties, configuration spaces

Atiyah, Michael The geometry of classical particles. **2003h:55022**
— Configurations of points. (English summary) **2003b:55016**
— (*with* Sutcliffe, Paul M.) The geometry of point particles. (English summary) **2003c:55019**
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55Sxx Operations and obstructions

55S10 Steenrod algebra

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55S12 Dyer-Lashof operations

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55S15 Symmetric products, cyclic products

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55S20 Secondary and higher cohomology operations

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— (*with* Lin, James P.) Cohomology rings of 3-local finite H-spaces. (English summary) **2003d:55022**
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55S25 K-theory operations and generalized cohomology operations [see also 19D55, 19Lxx]

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55S30 Massey products

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55S35 Obstruction theory

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55S36 Extension and compression of mappings

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55S37 Classification of mappings

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55S45 Postnikov systems, k-invariants

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55S91 Equivariant operations and obstructions [see also 19L47]

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55Txx Spectral sequences [see also 18G40, 55R20]

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Maldacena, Juan M. (*with* Moore, Gregory W.; Seiberg, Nathan) D-brane instantons and K-theory charges. (English summary) **2003d:81246**
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55T10 Serre spectral sequences

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55T15 Adams spectral sequences

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55T20 Eilenberg-Moore spectral sequences [see also 57T35]

Kuribayashi, Katsuhiko Module derivations and non triviality of an evaluation fibration. (English summary) **2003h:55025**
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Choi, Younggi Torsion in the cohomology of finite H-spaces. (English summary) **2003i:57058**
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55T25 Generalized cohomology

Items with secondary classifications in 55T25

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55Uxx Applied homological algebra and category theory [see also 18Gxx]

55U05 Abstract complexes

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55U10 Simplicial sets and complexes

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Reynaud, Eric Algebraic fundamental group and simplicial complexes. (English summary) **2003i:55022**
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55U40 Topological categories, foundations of homotopy theory

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57–XX Manifolds and cell complexes {For complex manifolds, see 32Qxx.}

57–01 Instructional exposition (textbooks, tutorial papers, etc.)

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57–06 Proceedings, conferences, collections, etc.

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57Mxx Low-dimensional topology

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57M05 Fundamental group, presentations, free differential calculus

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57M07 Topological methods in group theory

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57M10 Covering spaces

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57M12 Special coverings, e.g. branched

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57M15 Relations with graph theory [see also 05Cxx]

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57N12 Topology of E^3 and S^3 [see also 57M40]

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57N15 Topology of E^n, n-manifolds $(4 < n < \infty)$

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57N16 Geometric structures on manifolds [see also 57M50]

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57N17 Topology of topological vector spaces

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57N20 Topology of infinite-dimensional manifolds [see also 58Bxx]

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57N25 Shapes [see also 54C56, 55P55, 55Q07]

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Chigogidze, Alex Infinite dimensional topology and shape theory. **2003b:57030**
Daverman, Robert J. (*with* Kim, Yongkuk) 2-groups and approximate fibrations. (English summary) **2003i:55018**
Iwamoto, Yutaka (*with* Sakai, Katsuro) Strong n-shape theory. (English summary) **2003f:55014**
Kim, Yongkuk *see* **Daverman, Robert J., 2003i:55018**
Sakai, Katsuro *see* **Iwamoto, Yutaka, 2003f:55014**

57N35 Embeddings and immersions

Bryant, John Logan (*with* Kirby, Penelope) Splitting manifold approximate fibrations. (English summary) **2003h:57030**
Fang, Fu Quan Orientable 4-manifolds topologically embed into $\mathbb{R}^7$. (English summary) **2003j:57035**
Ivančić, Dubravko Embeddability of noncompact hyperbolic manifolds as complements of codimension-1 and -2 submanifolds. (English summary) **2003a:57045**
Kirby, Penelope *see* **Bryant, John Logan, 2003h:57030**
Kuramoto, Yoshiyuki (*with* Yasui, Tsutomu) On Haefliger's obstructions to embeddings and transfer maps. **2003j:57036**
Nowik, Tahl Automorphisms and embeddings of surfaces and quadruple points of regular homotopies. (English summary) **2003i:57034**
Yasui, Tsutomu *see* **Kuramoto, Yoshiyuki, 2003j:57036**

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Akhmet'ev, P. M. Generalized Daverman's problem. **2003b:54013**
Satoh, Shin Triple point invariants of non-orientable surface-links. (English summary) **2003f:57048**
Venema, Gerard A. *see* **Vo Thanh Liem, 2003h:57029**
Vo Thanh Liem (*with* Venema, Gerard A.) Representing homology classes of simply connected 4-manifolds. (English summary) **2003h:57029**
Yagasaki, Tatsuhiko Embedding spaces and hyperspaces of polyhedra in 2-manifolds. (English summary) **2003j:57034**

57N37 Isotopy and pseudo-isotopy

Melikhov, S. A. On maps with unstable singularities. (English summary) **2003i:57035**

57N40 Neighborhoods of submanifolds

Pugh, Charles Chapman Smoothing a topological manifold. (English summary) **2003j:57037**

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Onischenko, Alexander (*with* Repovš, Dušan D.; Skopenkov, A. B.) Resolutions of 2-polyhedra by fake surfaces and embeddings into $\mathbb{R}^4$. (English summary) **2003h:57033**
Repovš, Dušan D. *see* **Onischenko, Alexander et al., 2003h:57033**
Skopenkov, A. B. *see* **Onischenko, Alexander et al., 2003h:57033**

57N45 Flatness and tameness

Items with secondary classifications in 57N45

Fang, Fu Quan Orientable 4-manifolds topologically embed into $\mathbb{R}^7$. (English summary) **2003j:57035**

57N60 Cellularity

Mimura, Mamoru (*with* Nishimoto, Tetsu) On the cellular decomposition of the exceptional Lie group G_2. (English summary) **2003c:57021**
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Onischenko, Alexander (*with* Repovš, Dušan D.; Skopenkov, A. B.) Resolutions of 2-polyhedra by fake surfaces and embeddings into $\mathbb{R}^4$. (English summary) **2003h:57033**
Repovš, Dušan D. *see* **Onischenko, Alexander et al., 2003h:57033**
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57N65 Algebraic topology of manifolds

Aaslepp, Kerstin (*with* Drawe, Michael; Hayat-Legrand, Claude; Sczesny, Christian A.; Zieschang, Heiner) On the cohomology of Seifert and graph manifolds. (English summary) **2003j:57038**
Daverman, Robert J. Regular coverings involving homology spheres. (English summary) **2003b:57031**
Drawe, Michael *see* **Aaslepp, Kerstin et al., 2003j:57038**
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Cavicchioli, Alberto (*with* Hegenbarth, Friedrich; Spaggiari, Fulvia) Embedding 4-manifolds with vanishing second homology. (English summary) **2003g:57032**
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— *see also* **Cavicchioli, Alberto et al., 2003g:57032**
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57N70 Cobordism and concordance

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Bohr, Christian On the kinkiness of closed braids. (English summary) **2003k:57006**
Igusa, Kiyoshi (*with* Orr, Kent E.) Links, pictures and the homology of nilpotent groups. (English summary) **2003a:57011**
Kerler, Thomas (*with* Lyubashenko, Volodymyr V.) ★ Non-semisimple topological quantum field theories for 3-manifolds with corners. **2003b:57044**
Livingston, Charles The slicing number of a knot. (English summary) **2003m:57018**
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57N75 General position and transversality

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Cannon, J. W. (*with* Conner, Gregory R.; Zastrow, Andreas) One-dimensional sets and planar sets are aspherical. (English summary) **2003g:57028**
Conner, Gregory R. *see* **Cannon, J. W. et al., 2003g:57028**
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57N80 Stratifications

Hughes, C. Bruce Products and adjunctions of manifold stratified spaces. (English summary) **2003j:57039**

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Lebel, André Framed stratified sets in Morse theory. (English summary) **2003b:57051**

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Connolly, Francis X. (*with* Prassidis, Stratos) On the exponent of the cokernel of the forget-control map on K_0-groups. (English summary) **2003h:19001**
Gonçalves, Daciberg Lima (*with* Kelly, Michael R.) Connectivity properties for subspaces of function spaces determined by fixed points. (English summary) **2003m:54023**
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57Pxx Generalized manifolds [see also 18F15]

Weinberger, Shmuel Homology manifolds. **2003b:57032**

57P05 Local properties of generalized manifolds

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Biller, Harald Proper actions on cohomology manifolds. (English summary) **2003k:57042**

57P10 Poincaré duality spaces

Hegenbarth, Friedrich (*with* Piccarreta, Salvina) On Poincaré four-complexes with free fundamental groups. (English summary) **2003g:57033**
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Bokor, Imre A notion of connected sum for certain CW-complexes. (English summary) **2003m:55009**
Krushkal, Vyacheslav S. (*with* Lee, Ronnie) Surgery on closed 4-manifolds with free fundamental group. **2003d:57058**
Leary, Ian J. The Euler class of a Poincaré duality group. (English summary) **2003k:20087**
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Kirby, Penelope *see* **Bryant, John Logan, 2003h:57030**
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57Qxx PL-topology

Bryant, John Logan Piecewise linear topology. **2003a:57046**

57Q05 General topology of complexes

Bandieri, Paola (*with* Casali, Maria Rita; Gagliardi, Carlo) Representing manifolds by crystallization theory: foundations, improvements and related results. (English summary) **2003b:57033**
Casali, Maria Rita *see* **Bandieri, Paola et al., 2003b:57033**
Davis, Michael Walter (*with* Januszkiewicz, Tadeusz; Weinberger, Shmuel) Relative hyperbolization and aspherical bordisms: an addendum to "Hyperbolization of polyhedra" [J. Differential Geom. **34** (1991), no. 2, 347–388; MR 92h:57036] by Davis and Januszkiewicz. (English summary) **2003e:57038**
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Roberts, Justin Unusual formulae for the Euler characteristic. (English summary) **2003f:57045**
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Bokor, Imre A notion of connected sum for certain CW-complexes. (English summary) **2003m:55009**
Ontaneda, Pedro A space with two non-equivalent non-positively curved triangulations. (English summary) **2003g:53057**
Sakai, Katsuro An alternative proof of Cauty-Geoghegan's characterization of ANRs. (English summary) **2003g:54038**

57Q10 Simple homotopy type, Whitehead torsion, Reidemeister-Franz torsion, etc. [see also 19B28]

Amendola, Gennaro (*with* Benedetti, Riccardo; Costantino, Francesco; Petronio, Carlo) Branched spines of 3-manifolds and Reidemeister torsion of Euler structures. (English summary) **2003b:57034**
Benedetti, Riccardo *see* **Amendola, Gennaro et al., 2003b:57034**
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Forman, Robin Combinatorial Novikov-Morse theory. **2003f:57046**
Hutchings, Michael Reidemeister torsion in generalized Morse theory. (English summary) **2003f:57047**
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Yamasaki, Masayuki Relatively simple chain complexes.

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Hegenbarth, Friedrich (*with* Piccarreta, Salvina) On Poincaré four-complexes with free fundamental groups. (English summary) **2003g:57033**
Lück, Wolfgang ★ L^2-invariants: theory and applications to geometry and K-theory. **2003m:58033**

Mark, Thomas Torsion, TQFT, and Seiberg-Witten invariants of 3-manifolds. (English summary) **2003c:57032**
Ontaneda, Pedro A space with two non-equivalent non-positively curved triangulations. (English summary) **2003g:53057**
Pedersen, Erik Kjær Controlled methods in equivariant topology, a survey. (English summary) **2003k:57028**
Piccarreta, Salvina *see* **Hegenbarth, Friedrich**, **2003g:57033**
Ruini, Beatrice (*with* Spaggiari, Fulvia) On the computation of L-groups and natural maps. (English summary) **2003m:57068**
Spaggiari, Fulvia *see* **Ruini, Beatrice**, **2003m:57068**

57Q12 Wall finiteness obstruction for CW-complexes

Items with secondary classifications in 57Q12

Lorenz, Martin On Euler classes of abelian-by-finite groups. (English summary) **2003m:16007**

57Q15 Triangulating manifolds

Bukhshtaber, V. M. (*with* Panov, Taras E.) ★ Torus actions and their applications in topology and combinatorics. (English summary) **2003e:57039**
Datta, Basudeb (*with* Nilakantan, Nandini) Two-dimensional weak pseudomanifolds on eight vertices. (English summary) **2003c:57022**
Hama, Motoaki *see* **Nakamoto, Atsuhiro**, **2003h:57032**
King, Simon A. Regular flip equivalence of surface triangulations. (English summary) **2003m:57048**
Nakamoto, Atsuhiro (*with* Hama, Motoaki) Generating 4-connected triangulations on closed surfaces. (English summary) **2003h:57032**
Nilakantan, Nandini *see* **Datta, Basudeb**, **2003c:57022**
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Items with secondary classifications in 57Q15

Bryant, John Logan Piecewise linear topology. **2003a:57046**
Ontaneda, Pedro A space with two non-equivalent non-positively curved triangulations. (English summary) **2003g:53057**
Randall, Duane Equivalences to the triangulation conjecture. (English summary) **2003i:57032**

57Q20 Cobordism

Carter, J. Scott (*with* Kamada, Seiichi; Saito, Masahico; Satoh, Shin) Bordism of unoriented surfaces in 4-space. **2003m:57049**
Kamada, Seiichi *see* **Carter, J. Scott et al.**, **2003m:57049**
Saito, Masahico *see* **Carter, J. Scott et al.**, **2003m:57049**
Satoh, Shin *see* **Carter, J. Scott et al.**, **2003m:57049**

57Q25 Comparison of PL-structures: classification, Hauptvermutung

Farrell, F. Thomas (*with* Ontaneda, Pedro) Piecewise linear-non-representability of Out $\pi_1 M$. (English summary) **2003d:57048**
Ontaneda, Pedro The double of a hyperbolic manifold and non-positively curved exotic PL structures. (English summary) **2003g:57035**
— *see also* **Farrell, F. Thomas**, **2003d:57048**

57Q30 Engulfing

Items with secondary classifications in 57Q30

Bryant, John Logan Piecewise linear topology. **2003a:57046**

57Q35 Embeddings and immersions

Schmitt, Alexander H. W. On the classification of certain piecewise linear and differentiable manifolds in dimension eight and automorphisms of $\#_{i=1}^{b}(S^2 \times S^5)$. (English summary) **2003m:57050**
Skopenkov, A. B. On the Haefliger-Hirsch-Wu invariants for embeddings and immersions. (English summary) **2003c:57023**

Items with secondary classifications in 57Q35

Johnson, Craig M. An obstruction to embedding a simplicial n-complex into a $2n$-manifold. (English summary) **2003c:55023**
Kamada, Seiichi ★ Braid and knot theory in dimension four. (English summary) **2003d:57050**
Kanenobu, Taizo (*with* Shima, Akiko) Two filtrations of ribbon 2-knots. (English summary) **2003h:57034**
Lambrechts, Pascal (*with* Stanley, Donald; Vandembroucq, Lucile) Embeddings up to homotopy of two-cones in Euclidean space. (English summary) **2003h:55012**
Nagase, Teruo (*with* Tsukui, Masaki) On properly nested normal immersions of the circle into the plane with Titus condition. (English summary) **2003g:53002**
Shima, Akiko *see* **Kanenobu, Taizo**, **2003h:57034**
Stanley, Donald *see* **Lambrechts, Pascal et al.**, **2003h:55012**
Tsukui, Masaki *see* **Nagase, Teruo**, **2003g:53002**
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Venema, Gerard A. *see* **Vo Thanh Liem**, **2003h:57029**
Vo Thanh Liem (*with* Venema, Gerard A.) Representing homology classes of simply connected 4-manifolds. (English summary) **2003h:57029**

57Q37 Isotopy

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Bryant, John Logan Piecewise linear topology. **2003a:57046**
Skopenkov, A. B. On the Haefliger-Hirsch-Wu invariants for embeddings and immersions. (English summary) **2003c:57023**

57Q40 Regular neighborhoods

Onischenko, Alexander (*with* Repovš, Dušan D.; Skopenkov, A. B.) Resolutions of 2-polyhedra by fake surfaces and embeddings into $\mathbb{R}^4$. (English summary) **2003h:57033**
Repovš, Dušan D. *see* **Onischenko, Alexander et al.**, **2003h:57033**
Skopenkov, A. B. *see* **Onischenko, Alexander et al.**, **2003h:57033**

Items with secondary classifications in 57Q40

Bryant, John Logan Piecewise linear topology. **2003a:57046**
Scott, Peter (*with* Swarup, Gadde A.) Regular neighbourhoods and canonical decompositions for groups. (English summary) **2003g:20072**
Swarup, Gadde A. *see* **Scott, Peter**, **2003g:20072**

57Q45 Knots and links (in high dimensions) {For the low-dimensional case, see 57M25.}

Asada, Masahiko An unknotting sequence for surface-knots represented by ch-diagrams and their genera. (English summary) **2003d:57049**
Blanlœil, Vincent (*with* Saeki, Osamu) A theory of concordance for non-spherical 3-knots. (English summary) **2003i:57037**
Cha, Jae Choon (*with* Ko, Ki Hyoung) Signatures of links in rational homology spheres. (English summary) **2003g:57036**
Ekholm, Tobias The complex shade of a real space, and its applications. (English summary) **2003i:57038**
Kamada, Seiichi ★ Braid and knot theory in dimension four. (English summary) **2003d:57050**
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Kanenobu, Taizo (*with* Shima, Akiko) Two filtrations of ribbon 2-knots. (English summary) **2003h:57034**
Kawauchi, Akio On linking signature invariants of surface-knots. (English summary) **2003g:57037**
— On pseudo-ribbon surface-links. (English summary) **2003h:57035**
Ko, Ki Hyoung *see* **Cha, Jae Choon**, **2003g:57036**
Ogasa, Eiji The intersection of spheres in a sphere and a new geometric meaning of the ARF invariant. (English summary) **2003j:57041**
Piergallini, Riccardo (*with* Zuddas, D.) Braiding non-orientable surfaces in S^4. (English summary) **2003a:57047**
Przytycki, Józef H. (*with* Rosicki, Witold) The topological interpretation of the core group of a surface in S^4. (English summary) **2003b:57035**
Roseman, Dennis Untangling some spheres in $\mathbf{R}^4$ by energy minimizing flow. (English summary) **2003m:57051**
Rosicki, Witold *see* **Przytycki, Józef H.**, **2003b:57035**
Saeki, Osamu Open books on 5-dimensional manifolds. (English summary) **2003j:57042**
— *see also* **Blanlœil, Vincent**, **2003i:57037**
Satoh, Shin Surface diagrams of twist-spun 2-knots. (English summary) **2003e:57041**
— Triple point invariants of non-orientable surface-links. (English summary) **2003f:57048**
Shima, Akiko Colorings and Alexander polynomials for ribbon 2-knots. (English summary) **2003h:57036**
— *see also* **Kanenobu, Taizo**, **2003h:57034**
Soma, Makoto Surface-links with square-type ch-graphs. (English summary) **2003c:57024**
Yamada, Yuichi A family of two-component links of real projective planes in the four-sphere. (English summary) **2003k:57027**
Zuddas, D. *see* **Piergallini, Riccardo**, **2003a:57047**

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Carter, J. Scott (*with* Elhamdadi, Mohamed; Saito, Masahico) Twisted quandle homology theory and cocycle knot invariants. (English summary) **2003a:57019**
Elhamdadi, Mohamed *see* **Carter, J. Scott et al.**, **2003a:57019**
Hillman, Jonathan A. ★ Four-manifolds, geometries and knots. **2003m:57047**
Iori, Massimiliano (*with* Piergallini, Riccardo) 4-manifolds as covers of the 4-sphere branched over non-singular surfaces. (English summary) **2003f:57007**
Ivanšić, Dubravko Embeddability of noncompact hyperbolic manifolds as complements of codimension-1 and -2 submanifolds. (English summary) **2003a:57045**
Kawauchi, Akio An intrinsic Arf invariant on a link and its surface-link analogue. (English summary) **2003c:57009**
Piergallini, Riccardo *see* **Iori, Massimiliano**, **2003f:57007**
Repovš, Dušan D. (*with* Skopenkov, A. B.) On projected embeddings and desuspending the α-invariant. (English summary) **2003g:57046**
Rudolph, Lee Quasipositive pretzels. (English summary) **2003a:57016**
Saito, Masahico *see* **Carter, J. Scott et al.**, **2003a:57019**
Schmitt, Alexander H. W. On the classification of certain piecewise linear and differentiable manifolds in dimension eight and automorphisms of $\#_{i=1}^{b}(S^2 \times S^5)$. (English summary) **2003m:57050**
Skopenkov, A. B. *see* **Repovš, Dušan D.**, **2003g:57046**

57Q55 Approximations

Items with secondary classifications in 57Q55

Repovš, Dušan D. (*with* Skopenkov, A. B.) On projected embeddings and desuspending the α-invariant. (English summary) **2003g:57046**
Skopenkov, A. B. *see* **Repovš, Dušan D.**, **2003g:57046**

57Q60 Cobordism and concordance

Items with secondary classifications in 57Q60

Blanlœil, Vincent (*with* Saeki, Osamu) A theory of concordance for non-spherical 3-knots. (English summary) **2003i:57037**

Cha, Jae Choon (*with* Ko, Ki Hyoung) Signatures of links in rational homology spheres. (English summary) **2003g:57036**

Ko, Ki Hyoung *see* **Cha, Jae Choon**, **2003g:57036**

Rognes, John Two-primary algebraic K-theory of pointed spaces. (English summary) **2003m:19002**

Saeki, Osamu *see* **Blanlœil, Vincent**, **2003i:57037**

Tamulis, Andrius Knots of ten or fewer crossings of algebraic order 2. (English summary) **2003b:57012**

57Q65 General position and transversality

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Guilbault, C. R. A non-$\mathcal{Z}$-compactifiable polyhedron whose product with the Hilbert cube is $\mathcal{Z}$-compactifiable. (English summary) **2003a:57044**

57Q91 Equivariant PL-topology

Pedersen, Erik Kjær Controlled methods in equivariant topology, a survey. (English summary) **2003k:57028**

57Q99 None of the above, but in this section

Forman, Robin Discrete Morse theory and the cohomology ring. (English summary) **2003g:57038**

Korepanov, I. G. Euclidean 4-simplices and invariants of four-dimensional manifolds. I. Surgeries $3 \to 3$. (Russian. Russian summary) **2003k:57029**

Li, Qi Sheng² *see* **Liu, Zhen**

Liu, Zhen (*with* Li, Qi Sheng²) Classification of a certain graphlike manifold with contraction. (English and Chinese summaries)

Sanders, Manuel J. Disjoint spine phenomena in certain contractible n-manifolds ($n \geq 5$). (English summary) **2003b:57036**

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Joswig, Michael Projectivities in simplicial complexes and colorings of simple polytopes. (English summary) **2003f:05047**

Lück, Wolfgang L^2-invariants of regular coverings of compact manifolds and CW-complexes. **2003a:58049**

57Rxx Differential topology {For foundational questions of differentiable manifolds, see 58Axx; for infinite-dimensional manifolds, see 58Bxx.}

57R10 Smoothing

Ding, Fan Some examples of nonorientable 4-manifolds. (English and Chinese summaries) **2003m:57052**

Krylov, Nikolai A. On the Jacobi group and the mapping class group of $S^3 \times S^3$. (English summary) **2003i:57039**

Items with secondary classifications in 57R10

Cavicchioli, Alberto (*with* Hegenbarth, Friedrich; Repovš, Dušan D.) Special classes of closed four-manifolds. (English summary) **2003a:57042**

Hegenbarth, Friedrich *see* **Cavicchioli, Alberto et al.**, **2003a:57042**

Masters, Joseph D. Virtual Betti numbers of genus 2 bundles. (English summary) **2003j:57029**

Pugh, Charles Chapman Smoothing a topological manifold. (English summary) **2003j:57037**

Repovš, Dušan D. *see* **Cavicchioli, Alberto et al.**, **2003a:57042**

57R15 Specialized structures on manifolds (spin manifolds, framed manifolds, etc.)

Breaz, Daniel (*with* Breaz, Nicoleta) Topological manifolds with a L_p structure. (English summary)

Breaz, Nicoleta *see* **Breaz, Daniel**

Cho, Yong Seung (*with* Hong, Yoon Hi) $\mathbb{Z}_p$-equivariant Spin-structures. (English summary) **2003j:57043**

Furuta, Mikio Monopole equation and the $\frac{11}{8}$-conjecture. **2003e:57042**

— (*with* Kametani, Y.; Matsue, H.) Spin 4-manifolds with signature $= -32$. (English summary) **2003e:57043**

Hong, Yoon Hi *see* **Cho, Yong Seung**, **2003j:57043**

Kametani, Y. *see* **Furuta, Mikio et al.**, **2003e:57043**

Matsue, H. *see* **Furuta, Mikio et al.**, **2003e:57043**

Ue, Masaaki On the intersection forms of Spin 4-manifolds bounded by spherical 3-manifolds. (English summary) **2003a:57048**

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57R56 Topological quantum field theories

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57R57 Applications of global analysis to structures on manifolds, Donaldson and Seiberg-Witten invariants [see also 58–XX]

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57R60 Homotopy spheres, Poincaré conjecture

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57S10 Compact groups of homeomorphisms

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57S15 Compact Lie groups of differentiable transformations

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57S20 Noncompact Lie groups of transformations

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57S25 Groups acting on specific manifolds

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57S30 Discontinuous groups of transformations

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57Txx Homology and homotopy of topological groups and related structures

57T05 Hopf algebras [see also 16W30]

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57T10 Homology and cohomology of Lie groups

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57T15 Homology and cohomology of homogeneous spaces of Lie groups

Künnemann, Klaus (*with* Tamvakis, Harry) The Hodge star operator on Schubert forms. (English summary) **2003f:57075**
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Benoist, Yves (*with* Dekimpe, Karel) The uniqueness of polynomial crystallographic actions. (English summary) **2003a:20078**
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Duan, Haibao Self-maps of the Grassmannian of complex structures. (English summary) **2003g:55029**
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Kramer, Linus Homogeneous spaces, Tits buildings, and isoparametric hypersurfaces. (English summary) **2003m:53078**
Le, Hui Ling *see* **Kendall, D. G. et al., 2003g:60018**
Lörinc, Juraj The height of the first Stiefel-Whitney class of any nonorientable real flag manifold. (English summary) **2003m:57053**
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57T20 Homotopy groups of topological groups and homogeneous spaces

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57T25 Homology and cohomology of H-spaces

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57T30 Bar and cobar constructions [see also 18G55, 55Uxx]

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Menichi, Luc On the cohomology algebra of a fiber. (English summary) **2003a:55020**

57T35 Applications of Eilenberg-Moore spectral sequences [see also 55R20, 55T20]

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58–XX Global analysis, analysis on manifolds {For geometric integration theory, see 49Q15.}

58–01 Instructional exposition (textbooks, tutorial papers, etc.)

(Astashov, A. M.) *see* **Nestruev, Jet, 2003m:58001**
(Bocharov, A. V.) *see* **Nestruev, Jet, 2003m:58001**
Boskoff, Wladimir Georges ★ Analiză pe varietăţi şi aplicaţii. (Romanian) [Analysis on manifolds and applications] **2003h:58001**
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(Krasil′shchik, I. S.) *see* **Nestruev, Jet, 2003m:58001**
Lang, Serge ★ Introduction to differentiable manifolds. **2003h:58002**
Lee, John M. ★ Introduction to smooth manifolds. (English summary) **2003k:58001**
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58–02 Research exposition (monographs, survey articles)

Christodoulou, Demetrios ★ The action principle and partial differential equations. **2003a:58001**

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Burgess, Mark ★ Classical covariant fields. (English summary) **2003d:70037**
Dijkgraaf, Robbert The mathematics of M-theory. (English summary) **2003d:81222c**
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Iwaniec, Tadeusz (*with* Martin, Gaven J.) ★ Geometric function theory and non-linear analysis. **2003c:30001**
Kunzinger, Michael *see* **Grosser, Michael et al., 2003d:46105**
Long, Yi Ming ★ Index theory for symplectic paths with applications. (English summary) **2003d:37091**
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58–03 Historical (must also be assigned at least one classification number from Section 01)

Items with secondary classifications in 58–03

(Babbage, Charles) *see* **Wilkes, Maurice V., 2003j:01040**
Brading, Katherine A. Which symmetry? Noether, Weyl, and conservation of electric charge. (English summary) **2003b:01035**
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Babbage, Charles *see* **Wilkes, Maurice V., 2003j:01040**

58–06 Proceedings, conferences, collections, etc.

(Banyaga, Augustin) *see* **Infinite dimensional Lie groups in geometry and representation theory, 2003c:58001**
(Esposito, Giampiero V. M.) *see* **Quantum gravity and spectral geometry**
(Leslie, Joshua A.) *see* **Infinite dimensional Lie groups in geometry and representation theory, 2003c:58001**
(Miele, Gennaro) *see* **Quantum gravity and spectral geometry**
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(Al′beverio, S.) *see* **Parabolicity, Volterra calculus, and conical singularities, 2003j:00021**
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(Bureš, Jarolím) *see* **Proceedings: School on Geometry and Physics**
(Demuth, Michael) *see* **Parabolicity, Volterra calculus, and conical singularities, 2003j:00021**
(Fukaya, Kenji) *see* **Minimal surfaces, geometric analysis and symplectic geometry, 2003c:53002**
(Gràcia, Xavier) *see* **Proceedings: Workshop on Geometry and Physics, 2003e:00033**
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(Nishikawa, Seiki) *see* **Minimal surfaces, geometric analysis and symplectic geometry, 2003c:53002**
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58Axx General theory of differentiable manifolds [see also 32Cxx]

Mikusiński, Piotr (*with* Taylor, Michael D.) ★ An introduction to multivariable analysis

from vector to manifold. (English summary) **2003e:58001**
Taylor, Michael D. *see* **Mikusiński, Piotr, 2003e:58001**

Items with secondary classifications in 58Axx

(Astashov, A. M.) *see* **Nestruev, Jet, 2003m:58001**
(Bocharov, A. V.) *see* **Nestruev, Jet, 2003m:58001**
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58A03 Topos-theoretic approach to differentiable manifolds

Lastaria, Federico G. On the category-theoretic approach to differential geometry. (English summary) **2003d:58001**

Items with secondary classifications in 58A03

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58A05 Differentiable manifolds, foundations

Farmitani, F. *see* **Molaei, M. R., 2003i:58001**
Kock, Anders Infinitesimal aspects of the Laplace operator. (English summary) **2003h:58003**
Krym, V. R. (*with* Petrov, Nikolaĭ Nikolaevich) Causal structures on smooth manifolds. (English summary) **2003d:58002**
Molaei, M. R. (*with* Farmitani, F.) Santilli isomanifolds in arbitrary dimensions. (English summary) **2003i:58001**
Petrov, Nikolaĭ Nikolaevich *see* **Krym, V. R., 2003d:58002**
Zvyagintsev, A. A. Differential equations in the Kock-Lawvere synthetic differential geometry. (Russian. English summary) **2003k:58002**

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Affane, Atallah Notion de liaison sur une variété. (English summary) [The notion of joining on a manifold] **2003i:53024**
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Kawakami, Tomohiro Algebraic and Nash realizations of vector bundles, and triviality of equivariant algebraic and Nash vector bundles. (English summary) **2003b:14072**
Kunzinger, Michael (*with* Steinbauer, Roland) Foundations of a nonlinear distributional geometry. (English summary) **2003e:46125**
Steinbauer, Roland *see* **Kunzinger, Michael, 2003e:46125**
Wurzbacher, Tilmann Introduction to differentiable manifolds and symplectic geometry. (English summary) **2003b:53085**

58A07 Real-analytic and Nash manifolds [see also 14P20, 32C07]

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Coste, Michel (*with* Ruiz, Jesús M.; Shiota, Masahiro) Uniform bounds on complexity and transfer of global properties of Nash functions. (English summary) **2003c:14065**
Ghiloni, Riccardo Algebraic obstructions and a complete solution of a rational retraction problem. (English summary) **2003j:14079**
Kawakami, Tomohiro Algebraic and Nash realizations of vector bundles, and triviality of equivariant algebraic and Nash vector bundles. (English summary) **2003b:14072**
— Equivariant differential topology in an o-minimal expansion of the field of real numbers. (English summary) **2003g:14079**
Ruiz, Jesús M. *see* **Coste, Michel et al., 2003c:14065**
Shiota, Masahiro *see* **Coste, Michel et al., 2003c:14065**

58A10 Differential forms

Bergeron, Nicolas Forme harmonique duale à un cycle quasi-fuchsien. (English and French summaries) [Dual harmonic form to a quasi-Fuchsian cycle] **2003b:58001**
Hou, Dennis On hypercomplexifying real forms of arbitrary rank. (English summary) **2003i:58002**
Malaspina, Angelica The Rudin-Carleson theorem for non-homogeneous differential forms. (English summary) **2003f:58001**
Meziani, Abdelhamid Hypoellipticity of nonsingular closed 1-forms on compact manifolds. (English summary) **2003f:58002**
Nurowski, Paweł (*with* Robinson, David Clyde) Generalized forms and their applications. (English summary) **2003h:58004**
Robinson, David Clyde *see* **Nurowski, Paweł, 2003h:58004**

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Barza, Ilie (*with* Ghisa, Dorin) Vector fields on nonorientable surfaces. (English summary) **2003k:30070**
Boskoff, Wladimir Georges ★ Analiză pe varietăţi şi aplicaţii. (Romanian) [Analysis on manifolds and applications] **2003h:58001**
Codriansky, Simón (*with* Gonzalez-Bernardo, Carlos A.; Navarro, Ramón) Nambu dynamical system: the case of many triplets. (English summary) **2003j:70025**
Dassios, George (*with* Lindell, Ismo V.) Uniqueness and reconstruction for the anisotropic Helmholtz decomposition. (English summary) **2003k:78006**
Ding, Shu Sen (*with* Nolder, Craig A.) Weighted Poincaré inequalities for solutions to A-harmonic equations. (English summary) **2003m:35069**
— (*with* Gai, Yun Ying) A_r-weighted Poincaré-type inequalities for differential forms in some domains [MR 2002b:46053]. (Chinese. English and Chinese summaries)
— $A_r(\Omega)$-weighted imbedding inequalities for A-harmonic tensors. (English summary) **2003m:31012**
Frank, Barbara *see* **Schweizer, Jürgen, 2003i:28010**
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Kachalov, A. P. Gaussian beams for the Maxwell equations on a manifold. (Russian. English and Russian summaries) **2003f:78007**
Katz, Gabriel Harmonic forms and near-minimal singular foliations. (English summary) **2003b:57042**
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Macdonald, Alan Stokes' theorem. (English summary) **2003i:26009**
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Runin, Michel Around heat decay on forms and relations of nilpotent Lie groups. (English summary) **2003f:58062**
Schneider, Manfred Friedrich Differential forms and partial differential equations. **2003g:26013**
Schweizer, Jürgen (*with* Frank, Barbara) Calculus on linear Cantor sets. (English summary) **2003i:28010**
Sikorav, Jean-Claude Growth of a primitive of a differential form. (English and French summaries) **2003h:58005**
Smol'nikova, M. V. On the global geometry of harmonic symmetric bilinear differential forms. (Russian. Russian summary) **2003g:53132**
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Yamasaki, Kazuhito (*with* Nagahama, Hiroyuki) A deformed medium including a defect field and differential forms. (English summary) **2003g:74011**

58A12 de Rham theory [see also 14Fxx]

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Items with secondary classifications in 58A12

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Boualem, Hassan (*with* Brouzet, Robert; Rakotondralambo, Joseph) Sur un résultat de décomposition de type de Rham. (French summary) [On a decomposition result of de Rham type] **2003f:53046**
Brouzet, Robert *see* **Boualem, Hassan et al., 2003f:53046**
Bueler, Ed (*with* Prokhorenkov, Igor) Hodge theory and cohomology with compact supports. (English summary) **2003c:58002**
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Gu, Xianfeng (*with* Yau, Shing-Tung) Computing conformal structures of surfaces. (English summary) **2003m:65023**
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Ibanez Torres, Raul (*with* Rudyak, Yu. B.; Tralle, A. E.; Ugarte, Luis) Symplectically harmonic cohomology of nilmanifolds. **2003m:53136**
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58A14 Hodge theory [see also 14C30, 14Fxx, 32J25, 32S35]

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58A15 Exterior differential systems (Cartan theory)

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58A17 Pfaffian systems

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58A20 Jets

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Kureš, Miroslav Weil algebras of generalized higher order velocities bundles. (English summary) **2003h:58006**
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Smolyakova, Larisa B. *see* **Shurygin, Vadim V., 2003j:58006**
Tomáš, Jiří Some classification problems on natural bundles related to Weil bundles. (English summary) **2003i:58007**
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58A25 Currents [see also 32C30, 53C65]

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58A30 Vector distributions (subbundles of the tangent bundles)

Adachi, Jiro Rigid paths of generic 2-distributions with degenerate points on 3-manifolds. (English summary) **2003e:58004**
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58A32 Natural bundles

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58A35 Stratified sets [see also 32S60]

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Orro, Patrice (*with* Trotman, David) Cône normal et régularités de Kuo-Verdier. (English and French summaries) [Normal cone and Kuo-Verdier regularities] **2003f:58006**
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58A40 Differential spaces

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58A50 Supermanifolds and graded manifolds [see also 14A22, 32C11]

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Cariñena, José F. (*with* Figueroa, Héctor) Singular Lagrangians in supermechanics. (English summary) **2003j:58007**
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58Bxx Infinite-dimensional manifolds

58B05 Homotopy and topological questions

Kunakovskaya, O. V. Cohomology functors on the category $\mathscr{H}^r$ of Banach manifolds. (English summary) **2003a:58007**
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Galanis, G. N. *see* **Vassiliou, E. E., 2003i:58011**
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Miculescu, Radu Equivalent definitions for Lipschitz compact connected manifolds. (English summary) **2003f:57044**
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Vassiliou, E. E. (*with* Galanis, G. N.) On associated Fréchet vector bundles. (English summary) **2003i:58011**

58B10 Differentiability questions

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58B12 Questions of holomorphy [see also 32–XX, 46G20]

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58B15 Fredholm structures [see also 47A53]

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58B25 Group structures and generalizations on infinite-dimensional manifolds [see also 22E65, 58D05]

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58B32 Geometry of quantum groups

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58B34 Noncommutative geometry (à la Connes)

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58D19 Group actions and symmetry properties

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58D25 Equations in function spaces; evolution equations [see also 34Gxx, 35K90, 35L90, 35R15, 37Lxx, 47Jxx]

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58D29 Moduli problems for topological structures

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58Exx Variational problems in infinite-dimensional spaces

Items with secondary classifications in 58Exx

Bobylev, N. A. *see* **Emel'yanov, S. V. et al., 2003f:49001**
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58E05 Abstract critical point theory (Morse theory, Ljusternik-Schnirelman (Lyusternik-Shnirel'man) theory, etc.)

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— (*with* Yan, Shusen) On the profile of the changing sign mountain pass solutions for an elliptic problem. (English summary) **2003d:35082**
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58E09 Group-invariant bifurcation theory

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58E12 Applications to minimal surfaces (problems in two independent variables) [see also 49Q05]

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58E17 Pareto optimality, etc., applications to economics [see also 90C29]

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58E35 Variational inequalities (global problems)

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58J10 Differential complexes [see also 35Nxx]; elliptic complexes

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58J15 Relations with hyperfunctions

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58J20 Index theory and related fixed point theorems [see also 19K56, 46L80]

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58J22 Exotic index theories [see also 19K56, 46L05, 46L10, 46L80, 46M20]

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58J26 Elliptic genera

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Dong, Chongying (*with* Liu, Kefeng; Ma, Xiaonan) On orbifold elliptic genus. (English summary) **2003j:58034**
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58J28 Eta-invariants, Chern-Simons invariants

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58J53 Isospectrality

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58J65 Diffusion processes and stochastic analysis on manifolds [see also 35R60, 60H10, 60J60]

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58J72 Correspondences and other transformation methods (e.g. Lie-Bäcklund) [see also 35A22]

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58J90 Applications

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58K05 Critical points of functions and mappings

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58K10 Monodromy

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58K15 Topological properties of mappings

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58K25 Stability

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58K30 Global theory

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58K35 Catastrophe theory

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58K40 Classification; finite determinacy of map germs

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58K45 Singularities of vector fields, topological aspects

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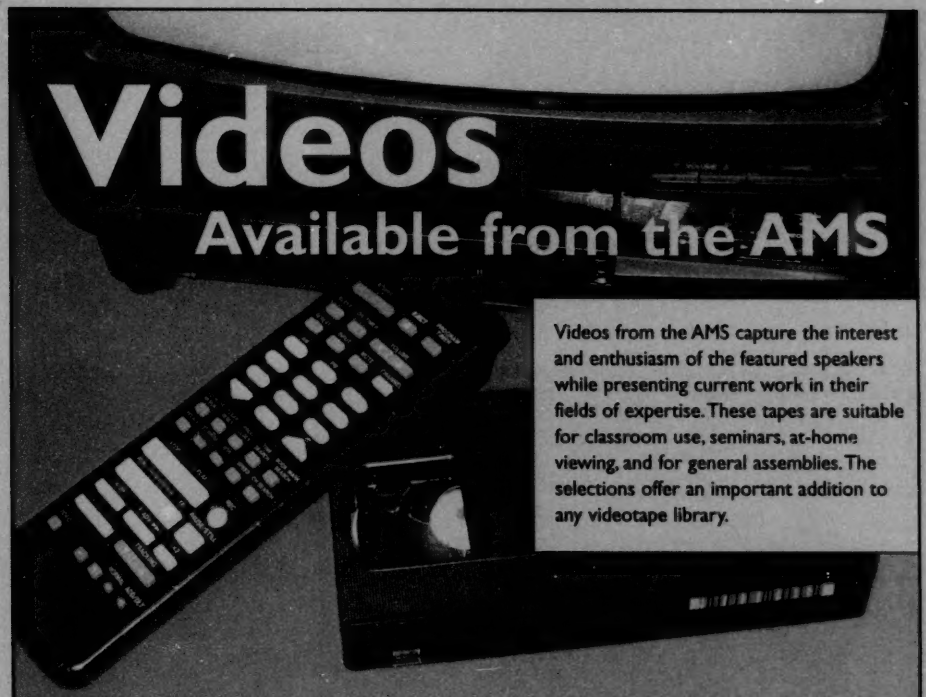
58Z05 Applications to physics



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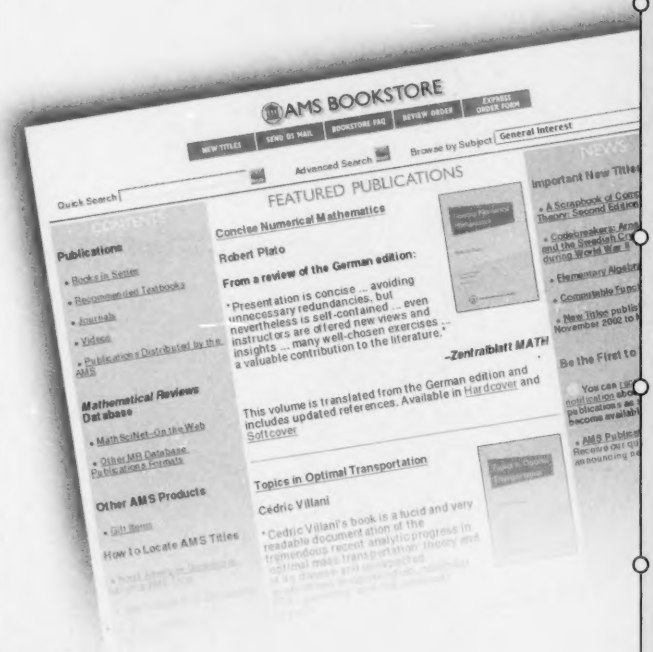

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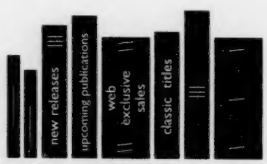

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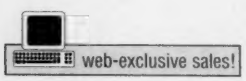

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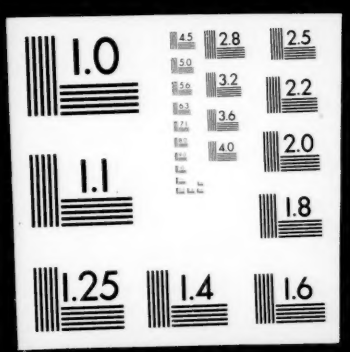
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